# IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS MARSHALL DIVISION

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SIPCO, LLC,	§	
	§	
Plaintiff,	§	
	§	
v.	§	CASE NO. 2:08-CV-359-JRG
	§	
AMAZON.COM, INC., et al.,	§	
	§	
Defendants.	§	
·	§	
	<b>§</b>	

### MEMORANDUM OPINION AND ORDER

Before the Court are Plaintiff's Opening *Markman* Brief in Support of its Claim Constructions (Dkt. No. 511), Defendants' Joint Brief in Support of Their Proposed Claim Constructions (Dkt. No. 522), and Plaintiff's Reply Brief in Support of its Claim Constructions (Dkt. No. 525).

Also before the Court are Plaintiff's Opening *Markman* Brief in Support of its Claim Constructions with Respect to U.S. Patent No. 7,697,492 (Dkt. No. 545), Defendant Crestron Electronics, Inc.'s Response Brief in Support of its Proposed Claim Constructions for US Patent No. 7,697,492 (Dkt. No. 546), and Plaintiff's Reply Brief in Support of its Claim Constructions with Respect to U.S. Patent No. 7,697,492 (Dkt. No. 550).

The Court held a hearing on September 26, 2012.

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#### BACKGROUND

Plaintiff SIPCO LLC asserts United States Patents Nos. 7,103,511 ("the '511 Patent"), 6,891,838 ("the '838 Patent"), and 7,697,492 ("the '492 Patent"). The '492 Patent was added to the case after claim construction briefing began on the '511 Patent and the '838 Patent, and the Court ordered a separate round of briefing on the '492 Patent. (*See* Dkt. No. 523.) The patents-in-suit all have common ancestors. The '511 Patent and the '838 Patent are related to one another through continuations-in-part based on United States Patent No. 6,218,953 ("the '953 Patent"). The '492 Patent is a continuation of a continuation-in-part of the '838 Patent.

The remaining Defendants are Crestron Electronics, Inc. and X10 Wireless Technology, Inc.

The patents-in-suit relate to "mesh networking," in which devices can communicate through any of the multiple paths created by overlap between the wireless ranges of devices in a network. Applications of this technology include monitoring and controlling residential or commercial systems, such as electricity, heating and cooling, security, lighting, or irrigation. (*See*, *e.g.*, '511 Patent at 22:1-10; '838 Patent at 9:15-33.)

The '511 Patent is titled "Wireless Communication Networks for Providing Remote Monitoring of Devices," and its Abstract states:

Wireless communication networks for monitoring and controlling a plurality of remote devices are provided. Briefly, one embodiment of a wireless communication network may comprise a plurality of wireless transceivers having unique identifiers. Each of the plurality of wireless transceivers may be configured to receive a sensor data signal from one of the plurality of remote devices and transmit an original data message using a predefined wireless communication protocol. The original data message may comprise the corresponding unique identifier and sensor data signal. Each of the plurality of wireless transceivers may be configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data

message using the predefined communication protocol. The repeated data message may include the sensor data signal and the corresponding unique identifier. Furthermore, at least one of the plurality of wireless transceivers may be further configured to provide the original data messages and the repeated data messages to a site controller connected to a wide area network. The site controller may be configured to manage communications between the wireless communication network and a host computer connected to the wide area network.

The '511 Patent was issued on September 5, 2006, and lists related applications filed as early as October 14, 1998. All asserted claims of the '511 Patent, namely Claims 1, 2, 3, 8, and 11, were confirmed by an Ex Parte Reexamination Certificate issued October 25, 2011. The asserted claims of the '511 Patent recite (disputed terms emphasized):

1. A wireless communication network adapted for use in an automated monitoring system for monitoring and controlling a *plurality of remote devices* via a *host computer* connected to a *wide area network*, the wireless communication network comprising:

a plurality of wireless transceivers having unique identifiers, each of the plurality of wireless transceivers configured to receive a *sensor* data signal from one of the *plurality of remote devices* and transmit an original data message using a predefined wireless communication protocol, the original data message comprising the corresponding unique identifier and *sensor* data signal, and further configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message using the predefined communication protocol, the repeated data message including the *sensor* data signal and the corresponding unique identifier; and

a site controller in communication with at least one of the plurality of wireless transceivers, the site controller configured to receive the original data messages and the repeated data messages, identify the remote device associated with the corresponding *sensor* data signal, and provide information related to the *sensor* data signal to the *wide area network* for delivery to the *host computer*.

2. The wireless communication network of claim 1, further comprising a plurality of *repeaters* having unique identifiers, each of the plurality of *repeaters* in communication with at least one of the plurality of wireless transceivers and configured to receive the original data message transmitted by the at least one of the plurality of wireless transceivers and transmit a repeated data message using the predefined communication protocol, the repeated data message including the *sensor* data signal from the original data message and the unique identifier corresponding to the repeater.

3. The wireless communication network of claim 1, wherein the site controller is further configured to provide a command message to one of the plurality of wireless transceivers and each of the plurality of wireless transceivers are further configured to transmit, in response to the command message, the original data message, wherein the original data message corresponds to the command message.

\* \* \*

8. A wireless communication network adapted for use in an automated monitoring system for monitoring and controlling a *plurality of remote devices* via a *host computer* connected to a *wide area network*, the wireless communication network comprising:

a plurality of wireless communication means having unique identifiers, each of the plurality of wireless communication means configured to receive a *sensor* data signal from one of the *plurality of remote devices* and transmit an original data message using a predefined wireless communication protocol, the original data message comprising the corresponding unique identifier and *sensor* data signal, and further configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message using the predefined communication protocol, the repeated data message including the *sensor* data signal and the corresponding unique identifier;

a means for receiving each of the original data messages and the repeated data messages;

a means for identifying, for each received message, the remote device associated with the corresponding sensor data signal; and

a means for providing information related to the *sensor* data signal to the *wide area network* for delivery to the *host computer*.

\* \* \*

11. The wireless communication network of claim 8, wherein the predefined communication protocol comprises a data packet comprising:

a means for identifying the receiver of the data packet;

a means for identifying the sender of the data packet; and

a command means for specifying a predefined command code.

The '838 Patent is titled "System and Method for Monitoring and Controlling Residential

Devices," and its Abstract states:

The present invention is generally directed to a system and method for monitoring and controlling a host of residential automation systems. The system is implemented by using a plurality of wireless communication devices configured

to relay both data and command encoded signals through the wireless network of communication devices interposed between integrated sensors/actuators and a gateway device. In accordance with a preferred embodiment, the gateway translates the data encoded signals and embeds the information in a data packet using terminal control protocol/Internet protocol to communicate the data to a computing device on a wide area network. The computing device may comprise data collection and or control algorithms as desired. The computing device may forward command signals to the gateway device. In response thereto, the gateway may convert the command signals into appropriate command encoded signals for wireless transmission to a designated actuator integrated in a residential system. The present invention can also be viewed as providing a method for monitoring and controlling residential systems. In its broadest terms, the method can be described as: sensing a parameter; generating a wireless signal; traversing a wireless network to a gateway interconnected with a wide area network; communicating the parameter to a computing device on the network; generating a control signal; communicating the control signal to the gateway; converting the control signal; and broadcasting the control signal such that an appropriate actuator is energized.

The '838 Patent was issued on May 10, 2005, and lists related applications filed as early as June 22, 1998. The asserted claims, Claims 40 and 59, were added during reexamination and were confirmed by an Ex Parte Reexamination Certificate issued September 6, 2011. (Dkt. No. 511, Ex. C, Ex Parte Reexamination Certificate 6,891,838 C1 ("'838 Reexam Certificate"). The asserted claims recite (disputed terms emphasized):

- 40. A distributed data monitoring and control system suitable for distinct residential automation applications, comprising:
- a first *sensor* configured to provide a first *sensor* data signal from a first local control system; and
- a first wireless communication device communicatively coupled to the first *sensor*, configured to receive the first *sensor* data signal from the first *sensor*; and configured to format and transmit a first encoded data signal;
- wherein the first encoded data signal comprises a first wireless communication device identifier, and comprises a first function code mapped from the received first sensor data signal,

wherein the first function code is selected from a generic set of function codes configured for distinct applications, such that the first sensor data signal from the first local control system is mapped to a corresponding function code of the generic set of function codes,

wherein the first wireless communication device is configured to transmit the first encoded data signal over a wireless transmission media to a *gateway* communicatively coupled to a *wide area network*, and

wherein the *gateway is configured to receive and translate the first encoded data signal into a wide area network data transfer protocol* for transmission to a computing device configured to collect, process, and store, the first encoded data signal.

\* \* \*

59. The distributed data monitoring and control system of claim 40, wherein the first wireless communication device is configured to receive a command signal transmission from the computing device via the *gateway*, and wherein the command signal transmission includes a command portion.

Id.

The '492 Patent is titled "Systems and Methods for Monitoring and Controlling Remote Devices," and its Abstract states:

Systems and methods for monitoring and controlling remote devices are provided. In an embodiment, a system can comprise one or more remotely controlled sensors and actuators. The remote sensors/actuators can interface with uniquely identified remote transceivers that transmit and/or receive data. The embodiment can also comprise a plurality of transceivers each having a unique address, and a controller adapted to communicate with at least one of the transceivers in a preformatted message. A sensor can be associated with at least one transceiver to detect a condition and output a data signal to the transceiver, and an actuator can be associated with a transceiver to receive a control signal and activate a device. Other embodiments are also claimed and described.

As noted above, the '492 Patent is a continuation of a continuation-in-part of the '838 Patent.

The claims at issue recite (disputed terms emphasized):

- 1. In a communication system to communicate command and sensed data between *remote devices*, the system comprising:
- a receiver address comprising a *scalable address* of at least one *remote device*;
  - a command indicator comprising a command code;
  - a data value comprising a scalable message; and
- a controller associated with a remote wireless device comprising a transceiver *configured to* send and receive wireless signals, the *remote device*

configured to send a preformatted message comprising the receiver address, a command indicator, and the data value via the transceiver to at least one other remote device.

\* \* \*

6. The system of claim 1, wherein each *remote device* is adapted to transmit and receive radio frequency transmissions to and from at least one other transceiver.

\* \* \*

8. A method of communicating command and sensed data between remote wireless devices, the method comprising:

providing a receiver to receive at least one message;

wherein the message has a packet that comprises a *command indicator comprising a command code*, a scalable data value comprising a scalable message, and an error detector that is a redundancy check error detector; and

providing a controller to determine if at least one received message is a duplicate message and determining a location from which the duplicate message originated.

Judge Savage of the Eastern District of Pennsylvania construed certain terms of the '511 Patent in *SIPCO*, *LLC*, et al. v. The Toro Company, et al., No. 2:08-CV-505, Dkt. No. 75 (E.D. Pa. Feb. 10, 2009) ("Toro"). (Dkt. No. 511, Ex. F.)

Judge Love of the Eastern District of Texas construed certain terms of United States

Patents No. 6,437,692 ("the '692 Patent") and 7,468,661 ("the '661 Patent") in SIPCO, LLC v.

Datamatic, Ltd., et al., No. 6:09-CV-532, Dkt. No. 161 (E.D. Tex. May 6, 2011) ("Datamatic").

(Dkt. No. 511, Ex. G). Those patents construed in Datamatic are related to each other and to the '511 and '492 Patents, both of which were derived from the '692 Patent though several continuation-in-part applications.

Judge Love also held a claim construction hearing on March 22, 2012, in SIPCO, LLC v. ABB Inc., et al., No. 6:11-CV-48 ("ABB"), during which the Court issued "Proposed Claim"

Constructions" for certain terms of the '511 Patent, the '492 Patent, and the '692 Patent. (Dkt. No. 511, Ex. H.). After the close of briefing on the '511 Patent and the '838 Patent in the above-captioned case, Judge Love entered a Memorandum Opinion and Order on claim construction in *ABB*. 2012 WL 3112302 (E.D. Tex. July 30, 2012) ("*ABB* Order"). Briefing on the '492 Patent in the above-captioned case has addressed the *ABB* Order.

#### LEGAL PRINCIPLES

"A claim in a patent provides the metes and bounds of the right which the patent confers on the patentee to exclude others from making, using or selling the protected invention." *Burke, Inc. v. Bruno Indep. Living Aids, Inc.*, 183 F.3d 1334, 1340 (Fed. Cir. 1999) (quoting *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257 (Fed. Cir. 1989). Claim construction is clearly an issue of law for the court to decide. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970-71 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996).

To ascertain the meaning of claims, courts look to three primary sources: the claims, the specification, and the prosecution history. *Markman*, 52 F.3d at 979. The specification must contain a written description of the invention that enables one of ordinary skill in the art to make and use the invention. *Id.* A patent's claims must be read in view of the specification, of which they are a part. *Id.* "For claim construction purposes, the description may act as a sort of dictionary, which explains the invention and may define terms used in the claims." *Id.* "One purpose for examining the specification is to determine if the patentee has limited the scope of the claims." *Watts v. XL Sys., Inc.*, 232 F.3d 877, 882 (Fed. Cir. 2000).

Nonetheless, it is the function of the claims, not the specification, to set forth the limits of the patentee's invention. Otherwise, there would be no need for claims. *SRI Int'l v. Matsushita* 

Elec. Corp., 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc). The patentee is free to be his own lexicographer, but any special definition given to a word must be clearly set forth in the specification. Intellicall, Inc. v. Phonometrics, Inc., 952 F.2d 1384, 1388 (Fed. Cir. 1992). Although the specification may indicate that certain embodiments are preferred, particular embodiments appearing in the specification will not be read into the claims when the claim language is broader than the embodiments. Electro Med. Sys., S.A. v. Cooper Life Sciences, Inc., 34 F.3d 1048, 1054 (Fed. Cir. 1994).

This Court's claim construction analysis is substantially guided by the Federal Circuit's decision in *Phillips v. AWH Corporation*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). In *Phillips*, the Federal Circuit set forth several guideposts that courts should follow when construing claims. In particular, the court reiterated that "the claims of a patent define the invention to which the patentee is entitled the right to exclude." 415 F.3d at 1312 (emphasis added) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To that end, the words used in a claim are generally given their ordinary and customary meaning. *Id.* The ordinary and customary meaning of a claim term "is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Id.* at 1313. This principle of patent law flows naturally from the recognition that inventors are usually persons who are skilled in the field of the invention and that patents are addressed to, and intended to be read by, others skilled in the particular art. *Id.* 

Despite the importance of claim terms, *Phillips* made clear that "the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in

which the disputed term appears, but in the context of the entire patent, including the specification." *Id.* Although the claims themselves may provide guidance as to the meaning of particular terms, those terms are part of "a fully integrated written instrument." *Id.* at 1315 (quoting *Markman*, 52 F.3d at 978). Thus, the *Phillips* court emphasized the specification as being the primary basis for construing the claims. *See id.* at 1314-17. As the Supreme Court stated long ago, "in case of doubt or ambiguity it is proper in all cases to refer back to the descriptive portions of the specification to aid in solving the doubt or in ascertaining the true intent and meaning of the language employed in the claims." *Bates v. Coe*, 98 U.S. 31, 38 (1878). In addressing the role of the specification, the *Phillips* court quoted with approval its earlier observations from *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998):

Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim. The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction.

Phillips, 415 F.3d at 1316.

The prosecution history also continues to play an important role in claim interpretation. Like the specification, the prosecution history helps demonstrate how the inventor and the Patent and Trademark Office ("PTO") understood the patent. *Id.* at 1317. Because the file history, however, "represents an ongoing negotiation between the PTO and the applicant," it may lack the clarity of the specification and thus be less useful in claim construction proceedings. *Id.* Nevertheless, the prosecution history is intrinsic evidence that is relevant to the determination of how the inventor understood the invention and whether the inventor limited the invention during

prosecution by narrowing the scope of the claims. *Id.*; *see Microsoft Corp. v. Multi-Tech Sys.*, *Inc.*, 357 F.3d 1340, 1350 (Fed. Cir. 2004) (noting that "a patentee's statements during prosecution, whether relied on by the examiner or not, are relevant to claim interpretation").

Phillips rejected any claim construction approach that sacrificed the intrinsic record in favor of extrinsic evidence, such as dictionary definitions or expert testimony. The *en banc* court condemned the suggestion made by *Texas Digital Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193 (Fed. Cir. 2002), that a court should discern the ordinary meaning of the claim terms (through dictionaries or otherwise) before resorting to the specification for certain limited purposes.

Phillips, 415 F.3d at 1319-24. According to *Phillips*, reliance on dictionary definitions at the expense of the specification had the effect of "focus[ing] the inquiry on the abstract meaning of words rather than on the meaning of claim terms within the context of the patent." *Id.* at 1321.

Phillips emphasized that the patent system is based on the proposition that the claims cover only the invented subject matter. *Id.* 

Phillips does not preclude all uses of dictionaries in claim construction proceedings.

Instead, the court assigned dictionaries a role subordinate to the intrinsic record. In doing so, the court emphasized that claim construction issues are not resolved by any magic formula. The court did not impose any particular sequence of steps for a court to follow when it considers disputed claim language. *Id.* at 1323-25. Rather, *Phillips* held that a court must attach the appropriate weight to the intrinsic sources offered in support of a proposed claim construction, bearing in mind the general rule that the claims measure the scope of the patent grant.

Finally, prior claim construction proceedings involving the same patents-in-suit are "entitled to reasoned deference under the broad principals of *stare decisis* and the goals articulated by the Supreme Court in *Markman*, even though *stare decisis* may not be applicable *per se.*" *Maurice Mitchell Innovations, LP v. Intel Corp.*, No. 2:04-CV-450, 2006 WL 1751779, at \*4 (E.D. Tex. June 21, 2006).

#### CONSTRUCTION OF DISPUTED TERMS

# A. "[plurality of] remote devices" ('511 Patent, Claims 1 and 8)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
Plain and ordinary meaning	"two or more devices, of which at least one includes a sensor"
Alternatively, "one or more devices that are monitored and/or controlled"	

(Dkt. No. 511 at 8; Dkt. No. 522 at 5.)

#### (1) The Parties' Positions

Plaintiff argues that "[a]s determined by the *Toro* court, there is no need to construe 'remote devices' because the claim language is clear." (Dkt. No. 511 at 8-9). Plaintiff argues that Defendants' proposal is not supported by the claim language and "is further contradicted by the specification, which states that a remote device *could employ* a sensor *or* an actuator." (*Id.* at 9 (citing '511 Patent at 21:52-57).)

Defendants respond that Plaintiff's proposal is overbroad and that Plaintiff's proposal of "one or more" contradicts the express recitation of a "plurality" in the claims. (Dkt. No. 522 at 5-6.) Defendants also argue that "remote devices" must include at least one sensor because the claims "recite that 'a sensor data signal' is received 'from one of the plurality of remote

devices" and "[t]he '511 patent describes remote devices as those that employ 'a sensor and/or an actuator." (*Id.* (quoting '511 Patent at 21:55-56).)

Plaintiff replies that "receiving [a sensor data] signal does not require that remote devices include a sensor." (Dkt. No. 525 at 3.)

At the September 26, 2012 hearing, Plaintiff agreed that where there is a "sensor data signal" recited in the claims, there must be a sensor somewhere as part of the system, but Plaintiff maintained that it would be inappropriate to "cram" a sensor into the construction of the term "remote device." Plaintiff also argued that although "plurality" generally means "two or more," not all of the claims recite "plurality" before "remote devices" and that in some instances the term is "remote device," singular.

### (2) Analysis

Although Plaintiff argues that this term should not be construed, the briefing demonstrates that the parties have a "fundamental dispute regarding the scope of a claim term," and the Court has a duty to resolve the dispute. *See O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362-63 (Fed. Cir. 2008).

Claim 1 is representative and recites (emphasis added):

1. A wireless communication network adapted for use in an automated monitoring system for monitoring and controlling *a plurality of remote devices* via a host computer connected to a wide area network, the wireless communication network comprising:

a plurality of wireless transceivers having unique identifiers, each of the plurality of wireless transceivers configured to receive a sensor data signal from one of the *plurality of remote devices* and transmit an original data message using a predefined wireless communication protocol, . . . and further configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message using the predefined communication protocol, the repeated data message including the sensor data signal and the corresponding unique identifier; . . . .

The parties dispute whether to construe "remote devices" or the larger term "plurality of remote devices." Construing the larger term is more natural and will be more helpful to the finder of fact.

"'[P]lurality' ordinarily means 'at least two." *ResQNet.com, Inc. v. Lansa, Inc.*, 346
F.3d 1374, 1383 (Fed. Cir. 2003); *see also August Tech. Corp. v. Camtek, Ltd.*, 655 F.3d 1278, 1286 (Fed. Cir. 2011) (regarding semiconductor material, finding that "plurality of wafers means more than one physically distinct wafer"); *Leggett & Platt, Inc. v. Hickory Springs Mfg. Co.*, 285 F.3d 1353, 1357 (Fed. Cir. 2002) ("At the outset, the claim recites 'support wires' in the plural, thus requiring more than one welded 'support wire."); *Dayco Prods., Inc. v. Total Containment, Inc.*, 258 F.3d 1317, 1328 (Fed. Cir. 2001) (noting that "'plurality,' when used in a claim, refers to two or more items, absent some indication to the contrary") (citing *York Prods., Inc. v. Cent. Tractor Farm & Family Ctr.*, 99 F.3d 1568, 1575 (Fed. Cir. 1996)).

Because Plaintiff has shown no reason to depart from this general rule, the Court adopts Defendants' proposal that a "plurality of remote devices" refers to "two or more devices." To the extent the term "remote device" appears in singular form and without being recited as a "plurality," then the limitation of "two or more" does not apply.

As to the remainder of Defendants' proposal, Claims 1 and 8 recite transceivers that "receive a sensor data signal from one of the plurality of remote devices." On one hand, the claims only recite "a sensor data signal," not a sensor. The specification also discloses "[t]ransceivers 135 that function in automated monitoring system 100 as both a repeater and an integrated transceiver." ('511 Patent at 7:8-29.) When functioning as a repeater, the transceiver merely passes along the received message.

On the other hand, Claims 1 and 8 go on to recite transceivers configured to "transmit an original data message . . . comprising the . . . sensor data signal." The specification provides little additional guidance on the meaning of an "original data message" except to reiterate that an original data message comprises a sensor data signal. (*See* '511 Patent at Abstract & 2:59-60 (Summary of the Invention).)

On balance, a person of ordinary skill in the art reading the claims would conclude that there could be no "sensor data signal" without a sensor, particularly in light of the recited ability to transmit "an original data message," not merely a repeated message. A sensor is inherently present. *Cf. Therasense, Inc. v. Becton, Dickinson & Co.*, 593 F.3d 1325, 1332 (Fed. Cir. 2010) ("[A]nticipation by inherent disclosure is appropriate only when the reference discloses prior art that must *necessarily* include the unstated limitation.") (quoting *Transclean Corp. v. Bridgewood Servs., Inc.*, 290 F.3d 1364, 1373 (Fed. Cir. 2002)) (emphasis added). Such a reading is also consistent with the specification, which discloses:

In accordance with the invention, a variety of remote devices, such as utility meter devices, personal security devices, household devices and appliances, *and other remote devices employing a sensor and/or an actuator*, may be monitored and/or controlled from a remote location via a computing device connected to WAN 120.

('511 Patent at 21:52-58 (emphasis added).) Likewise, the Background of the Invention discloses that "[t]he plurality of remote devices typically use remote sensors and controllers . . . . " (*Id.* at 1:48-51.) Finally, Figure 2 and the associated description further support reading Claims 1 and 8 to require a sensor:

As illustrated in FIG. 2, the sensor 140 may be in communication with the transceiver 135. Transceiver 135 may comprise an RF transceiver controller 210, a data interface 205, a microcontroller 215, a memory 220, and an antenna 225.

A data signal forwarded from the sensor 140 may be received by the data interface 205.

('511 Patent at 6:62-67.)

The Court therefore hereby construes "plurality of remote devices" to mean "two or more devices, at least one of which includes a sensor."

### B. "host computer" ('511 Patent, Claims 1 and 8)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
Plain and ordinary meaning	"a computer connected to a wide area network which receives information related to sensor
Alternatively, "a computing device that provides services"	data signals, and monitors and controls a plurality of remote devices in response to the received information"

(Dkt. No. 511 at 9; Dkt. No. 522 at 6.)

### (1) The Parties' Positions

Plaintiff argues that the claim language is clear, but alternatively Plaintiff cites a dictionary definition that defines "host" as meaning that "[a] host computer provides services." (Dkt. No. 511 at 9-10 (citing Ex. L, *Microsoft Computer Dictionary* 256 (5th ed. 2002)).) Plaintiff argues that Defendants improperly read "communicates with a plurality of remote devices over a wide area network" into the claim because the limitation is redundant with other language in the claim. (*Id.* at 10.) As to Defendants' proposal of "monitors and controls," Plaintiff argues that Defendants are attempting to import a limitation from an exemplary embodiment." (*Id.*)

Defendants respond that "every embodiment of the *claimed* subject matter" requires what Defendants have proposed. (Dkt. No. 522 at 6-7 (citing '511 patent at 2:48-52).) During the original prosecution, Defendants further argue, the patentee and, in turn, the examiner, relied on

the feature of monitoring "and" controlling remote devices. (*Id.* at 7.) The examiner then cited that limitation in the reasons for allowance. (*Id.*)

Plaintiff replies that there is no prosecution history disclaimer because "[t]he statements relied upon by Defendants discussing 'monitoring and controlling' refer to the claimed network as a whole – not specifically to the 'host computer' element of that network." (Dkt. No. 525 at 4.) Plaintiff further re-urges that "the preamble merely describes uses of the invention – monitoring and controlling – and is therefore not limiting." (*Id.*) And even if the preamble is limiting, Plaintiff argues, "monitoring and controlling" should not be a limitation of the "host computer." (*Id.*) Finally, Plaintiff argues that Defendants' proposal of "the additional phrase 'based on the received information' is vague, confusing, and not even found in the preamble." (*Id.* at 4-5.)

At the September 26, 2012 hearing, Plaintiff reiterated that the prosecution history referring to monitoring and controlling does so with regard to the claimed system as a whole, as opposed to the "host computer" in particular.

### (2) Analysis

Although Plaintiff argues that this term should not be construed, the briefing demonstrates that the parties have a "fundamental dispute regarding the scope of a claim term," and the Court has a duty to resolve the dispute. *See O2 Micro*, 521 F.3d at 1362-63.

Claim 1 of the '511 Patent is representative and recites, in relevant part (emphasis added):

1. A wireless communication network adapted for use in an automated monitoring system for monitoring and controlling a plurality of remote devices via a *host computer* connected to a wide area network, the wireless communication network comprising:

a plurality of wireless transceivers having unique identifiers, each of the plurality of wireless transceivers configured to receive a sensor data signal from one of the plurality of remote devices and transmit an original data message . . . and further configured to receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message . . .; and a site controller in communication with at least one of the plurality of wireless transceivers, the site controller configured to receive the original data messages and the repeated data messages, identify the remote device associated with the corresponding sensor data signal, and provide information related to the sensor data signal to the wide area network for delivery to the *host computer*.

The parties dispute whether the preamble is limiting as to: (1) the host computer being connected to a wide area network; and (2) the host computer *monitoring and controlling* a plurality of remote devices.

In general, a preamble limits the invention if it recites essential structure or steps, or if it is necessary to give life, meaning, and vitality to the claim. . . . [A] preamble is not limiting where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention.

Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc., 289 F.3d 801, 808 (Fed. Cir. 2002) (citation and internal quotation marks omitted).

On one hand, the term "host computer" appears in the body of Claim 1 and of Claim 8, and the only antecedent basis appears in the preamble. This weighs in favor of finding that the preamble limits the meaning of "host computer." *See Seachange Int'l, Inc. v. C-COR, Inc.*, 413 F.3d 1361, 1376 (Fed. Cir. 2005) ("The preamble provides the only antecedent basis and thus the context essential to understand the meaning of 'processor system'; therefore, the preamble, including the phrase 'distributed computer system,' limits the scope of the claimed invention.").

On the other hand, the bodies of Claims 1 and 8 recite a "site controller" configured to "provide information related to the sensor data signal to the wide area network for delivery to the host computer." The preamble thus appears to be at least partially "duplicative" of the body of

the claim, which weighs against finding the preamble limiting. *Symantec Corp. v. Computer Assocs. Int'l, Inc.*, 522 F.3d 1279, 1288-89 (Fed. Cir. 2008) ("[I]n general, the purpose of a claim preamble is to give context for what is being described in the body of the claim; if it is reasonably susceptible to being construed to be merely duplicative of the limitations in the body of the claim (and was not clearly added to overcome a rejection), we do not construe it to be a separate limitation.").

The original prosecution history resolves the issue. The well-established doctrine of prosecution disclaimer "preclud[es] patentees from recapturing through claim interpretation specific meanings disclaimed during prosecution." Omega Eng'g Inc. v. Raytek Corp., 334 F.3d 1314, 1323 (Fed. Cir. 2003). "Indeed, by distinguishing the claimed invention over the prior art, an applicant is indicating what the claims do not cover." Spectrum Int'l v. Sterilite Corp., 164 F.3d 1372, 1378-79 (Fed. Cir. 1988) (quotation omitted). "As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public's reliance on definitive statements made during prosecution." Omega Eng'g, 334 F.3d at 1324. However, the prosecution history must show that the patentee clearly and unambiguously disclaimed or disavowed the proposed interpretation during prosecution to obtain claim allowance. Middleton Inc. v. 3M Co., 311 F.3d 1384, 1388 (Fed. Cir. 2002). Statements will constitute disclaimer of scope only if they are "clear and unmistakable statements of disavowal." Cordis Corp. v. Medtronic Ave, Inc., 339 F.3d 1352, 1358 (Fed. Cir. 2003). An "ambiguous disavowal" will not suffice. Schindler Elevator Corp. v. Otis Elevator Co., 593 F.3d 1275, 1285 (Fed. Cir. 2010) (citation omitted).

After the examiner entered a final rejection of the claims at issue, the patentee appealed to the Board of Patent Appeals and Interferences ("BPAI") and filed an Appeal Brief on December 31, 2003. The patentee framed the issue as: "Are rejected claims 1-29 patentable under 35 U.S.C. §103(a) over U.S. Patent No. 5,907,491 to Canada *et al.* ('the '491 patent') in view of U.S. Patent No. 6,141,437 to Shaughnessy *et al.* ('the '347 patent')." The patentee argued:

The wireless communication network of independent claim 1 is designed for "monitoring and controlling a plurality of remote devices via a host computer connected to a wide area network." Unlike the wireless communication network of independent claim 1, the localized systems taught in the '491 patent merely monitor physical characteristics, such as vibration or temperature, of industrial machines within a manufacturing plant. The '491 patent does not disclose, teach, or suggest the limitation of controlling the remote devices. Rather, the system merely responds to a polling request from the command station 6, senses the physical characteristic of the machine, and transmits the data to the command station 6.

The Examiner insists that the '491 patent teaches the feature of controlling the remote devices. As discussed throughout the Detailed Description of the present application (see FIG. 1), the wireless transceivers 135 are associated with sensors/actuators 130. The wireless communication network of independent claim 1 enables the actuators 130 to be controlled (*i.e.*, actuated). Appellant respectfully submits that the '491 patent does not teach, disclose, or suggest controlling the remote devices. Furthermore, the cellular networks taught in the '347 patent clearly do not disclose, teach, or suggest *controlling* the mobile phones.

The wireless communication network of independent claim 1 *monitors <u>and controls</u>* the remote devices, which is not disclosed, taught, or suggested by the '491 patent and the '347 patent.

(Dkt. No. 522, Ex. A, 12/31/2003 Appeal Brief, at 12 (emphasis as in original); *see also id.* at 21-22, 31-32, 41-42 & 51.) Because the patentee thus expressly relied on monitoring *and controlling*, as recited in the preambles of Claims 1 and 8, that language is limiting. *Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1376, 1381 (Fed. Cir. 2011) ("The patentee is bound by

representations made and actions that were taken in order to obtain the patent."); *cf. Amazon.com, Inc. v. barnesandnoble.com, Inc.*, 239 F.3d 1343, 1351 (Fed. Cir. 2001) ("A patent may not, like a 'nose of wax,' be twisted one way to avoid anticipation and another to find infringement.")

Similarly, the patentee distinguished the prior art '491 Patent by arguing that "the ['491] system requires *local* transmission and not transmission over a *wide* area network." (Dkt. No. 522, Ex. A, 12/31/2003 Appeal Brief, at 11 (emphasis as in original); *see also id.* at 21, 30, 40 & 50.) This explicit reliance on the recitation of a "wide area network" in the preambles of Claims 1 and 8 is also limiting. *Typhoon Touch*, 659 F.3d at 1381.

As to Defendants' proposal that "host computer" be construed to include "receives information related to sensor data signals," such language would be redundant because Claims 1 and 8 recite "[provide / providing] information related to the sensor data signal to the wide area network for delivery to the host computer." Defendants' proposal in this regard is therefore rejected.

Finally, Defendants propose that the host computer monitors and controls "in response to the received information," but such a limitation is not supported by the plain language of the claim, and Defendants have not shown support for importing such a limitation. (*See* Dkt. No. 522 at 6-7.) Defendants' proposal in that regard is therefore rejected.

The Court hereby construes "host computer" to mean "computer, connected to a wide area network, that monitors and controls a plurality of remote devices."

### C. "wide area network" ('511 Patent, Claims 1 and 8; '838 Patent, Claim 40)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
Plain and ordinary meaning	"a geographically widespread network such as the Internet"
Alternatively, "a network such as the Internet or an intranet"	

(Dkt. No. 511 at 10; Dkt. No. 522 at 8.)

## (1) The Parties' Positions

Plaintiff submits that if any construction is necessary, Plaintiff's proposal is proper because it is the same construction agreed upon by the parties in *Toro* and *Datamatic*. (Dkt. No. 511 at 10-11.) Plaintiff argues that Defendants' proposal of "geographically widespread" is vague and "could exclude a preferred embodiment of the invention – an intranet," as illustrated in Figures 1, 3, 4, 10, and 11, according to Plaintiff. (*Id.* at 11.)

Defendants respond that regardless of what parties in other cases may have agreed to, the patentee limited the meaning of "wide area network" during prosecution by distinguishing certain cited references as teaching only "localized wireless monitoring systems" that "require[] local transmission and not transmission over a wide area network." (Dkt. No. 522 at 8-9.) Defendants further submit that in considering the patentee's arguments, the Board of Patent Appeals and Interferences agreed that the Canada '491 Patent reference contained "no disclosure . . . that the network can be a WAN or the internet." (*Id.* at 9.) Defendants argue that by distinguishing local systems during prosecution, Plaintiff cannot now seek to recapture an "intranet," which is a *local* network rather than a *wide area* network. (*Id.* at 9.)

Plaintiff replies that "[a]n intranet is simply a computer network that uses Internet protocols to share information within an organization. Therefore, it need not be 'localized' like

the prior art systems cited by Defendants." (Dkt. No. 525 at 5 (citing Ex. 4, http://www.merriam-webster.com/dictionary/intranet (defining "intranet" as "a network operating like the World Wide Web but having access restricted to a limited group of authorized users (as employees of a company)").)

At the September 26, 2012 hearing, Plaintiff also noted a construction by another district court of the term "wide-area-network" in a different patent as meaning: "A geographically distributed network composed of smaller networks of computers that are joined into a single large network using communications services provided by one or more common carriers. The Internet is an example of a WAN." *Atser Research Techs., Inc. v. Raba-Kistner Consultants, Inc., et al.*, No. 5:07-CV-93, Dkt. No. 168, slip op. at 17 (W.D. Tex. Feb. 27, 2009).

### (2) Analysis

As noted in subsection B., above, the patentee relied on the recitation of a "wide area network" in order to distinguish prior art on appeal to the BPAI:

The '491 patent relates to localized systems for monitoring physical characteristics, such as vibration or temperature, of industrial machines within a manufacturing plant and transmitting sensed data to a central command station located within the manufacturing plant for monitoring. The '491 patent states that the disclosed invention solved the cost and maintenance problems associated with other wired-type localized machine monitoring systems. It should be noted that the systems disclosed in the '491 patent were very simple communication systems in which the central command station polled the machine monitors for data as needed. The '491 patent, therefore, was mainly related to adding a simple wireless capability to existing systems for monitoring complex industrial machines by a command station within the manufacturing plant to improve cost, installation, and maintenance.

\* \* \*

Furthermore, Appellant submits that the '491 patent teaches away from using a WAN and corresponding wireless communication protocol. As mentioned above, the local system disclosed in the '491 patent is used to transmit physical

characteristics of industrial machines from monitors 4 (*inside a manufacturing plant*) to command station 8 (also *inside manufacturing plant*) via repeaters 8. In other words, the system requires *local* transmission and not transmission over a *wide* area network.

(Dkt. No. 522, Ex. A, 12/31/2003 Appeal Brief, at 9 & 11 (citation omitted, plain italics added, bold italics in original); *see also id.* at 21, 30, 40 & 50.) This constitutes a "definitive statement[] made during prosecution" that a "local" network is different from a "wide area network." *Omega Eng'g*, 334 F.3d at 1324. The BPAI agreed with the patentee: "Although Canada [(the '491 Patent)] discloses (col. 8, lines 6-9) that command station 6 can be connected to a PC [(personal computer)] network, we find no disclosure in Canada that the network can be a WAN [(Wide Area Network)] or the Internet." (Dkt. No. 522, Ex. A, 8/31/2005 Decision on Appeal, at 9 (p. 81 of 90 of Defs.' Ex. A).) The patentee's characterization of a "wide area network" as something *not* local should be given effect. *Typhoon Touch*, 659 F.3d at 1381 ("The patentee is bound by representations made and actions that were taken in order to obtain the patent.").

Defendants propose the Internet as an example of a wide area network. Figures 1, 3, 4, 10, and 11 identify a "WAN (Internet / Intranet)," and the specification of the '838 Patent refers to use of "dedicated WANs or Intranets." ('838 Patent at 4:18.) Also, the '838 Patent expressly discloses the Internet as an example of a wide area network. ('838 Patent at 4:16-17 (referring to "the public access WAN commonly known as the Internet").) Nonetheless, because the Internet is a public network, including the Internet as an example might imply to a finder of fact that the "wide area network" must be public. At the September 26, 2012 hearing, Defendants had no objection to the Court's suggestion that the example of the Internet be omitted to avoid potential confusion. Defendants' proposal to include the Internet as an example is therefore rejected.

Finally, Plaintiff argues that "an 'intranet,' as illustrated in Figures 1, 3, 4, 10, and 11, is a private network that need not be 'geographically widespread.'" (Dkt. No. 511 at 11.) As discussed above, the prosecution history expressly distinguished local networks. A "private" intranet, however, was not the subject of any prosecution disclaimer and is supported by Figures 1, 3, 4, 10, and 11. Thus, the wide area network can be an intranet but cannot be a local intranet.

On balance, Defendants' proposal of "geographically widespread" does not clarify the scope of the disputed term, which itself refers to a "wide area." The Court therefore hereby construes the term "wide area network" to have its plain and ordinary meaning. The Court nonetheless notes its understanding that the plain and ordinary meaning of "wide area network" does not include a local area network.

## D. "sensor" ('511 Patent, Claims 1, 2, and 8; '838 Patent, Claim 40)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
Plain and ordinary meaning	"a device, distinct from an actuator or transducer, that provides a data signal
Alternatively, "an equipment, program, or device that monitors or measures the state or status of a parameter or condition"	representing a monitored system parameter"

(Dkt. No. 511 at 11; Dkt. No. 522 at 10.)

#### (1) The Parties' Positions

Plaintiff notes that Judge Love in *ABB* preliminarily found that this term requires no construction. (Dkt. No. 511 at 11.) Plaintiff argues that the '511 Patent gives wide-ranging examples of sensors and that Defendants seek to import unnecessary limitations. (*Id.*) In particular, Plaintiff argue that a sensor need not be "distinct from an actuator or a transducer" because a sensor can be combined with an actuator, as illustrated in Figure 1 of the '511 Patent.

(*Id.*) Plaintiff further argues that Defendants' proposal of "provides a data signal" is "unnecessary within the context of the claims, which indicate when a sensor is to produce a signal." (*Id.*)

Defendants respond that a sensor is not a program and that "'sensors' and 'actuators' are different concepts." (Dkt. No. 522 at 10.) Defendants urge that although a sensor may be "integrated" with an actuator, "that does not mean they are one and the same." (*Id.* (citing '511 Patent at 9:33-52).) Finally, Defendants note that their reference to a "transducer" is supported by United States Patent Application No. 09/811,076, which the '511 Patent incorporated by reference, which issued as United States Patent No. 6,914,533 ("the '533 Patent"), and which discloses that a "wireless transceiver is interfaced with a sensor, transducer, actuator or some other device associated with an application parameter of interest." (*Id.* at 11; '533 Patent at 2:45-47.)

Plaintiff replies that it is not equating a sensor with a transducer or an actuator but rather is arguing it is "unnecessary to define a term in the negative – by explaining what it is not – as Defendants have proposed." (Dkt. No. 525 at 5.)

### (2) Analysis

Although Plaintiff argues that this term should not be construed, the briefing demonstrates that the parties have a "fundamental dispute regarding the scope of a claim term," and the Court has a duty to resolve the dispute. *See O2 Micro*, 521 F.3d at 1362-63.

First, Plaintiff's briefing provides no support for its proposal of "program." (*See* Dkt. No. 511 at 11-12.) The evidence cited by Plaintiff in the parties' Joint Claim Construction and Prehearing Statement likewise contains no support for construing "sensor" to cover a "program."

(See Dkt. No. 496, App'x A at 4 (citing '511 Patent at 2:35, 4:53-56, 6:44-61, 7:30-40, 8:3-24, 9:8-10, 9:35-37 & 17:16-22 and Figs. 1 & 2) & App'x B at 12 (citing '838 Patent at 1:40-43, 2:47-59, 3:30-36, 7:5-21, 7:48-57 & 12:51-65 and Figs. 2, 3, & 4A-4D).) Upon its own review, the Court finds no disclosure in either the '511 Patent or the '838 Patent of a sensor being a "program."

At the September 26, 2012 hearing, Plaintiff responded to the Court's concern in this regard by arguing that the specification describes a sensor by its function rather than by its structure, such that a "sensor" could be anything, including a program. Plaintiff's position is rejected as lacking support in the intrinsic record or in case law. To the contrary, the Background of the Invention, for example, discloses that "[a] typical approach to implementing control system technology is to install a local network of hard-wired sensors and actuators along with a local controller." ('511 Patent at 2:11-14.) This disclosure of "hard-wired sensors" appears to presume that a "sensor" is a device rather than a program. In the absence of any disclosure that a "sensor" could be a program, Plaintiff's proposal of "program" should not be included in the Court's construction of "sensor."

The Court similarly finds no support for Plaintiff's proposal of the word "equipment." Plaintiff's proposed construction is therefore rejected as to "program" or "equipment."

Second, the parties dispute whether the construction of "sensor" should specify that a "sensor" is "distinct from an actuator or transducer," as Defendants propose. On one hand, the specification distinguishes between a "sensor 140" and a "sensor/actuator 130." (*See, e.g.,* '511 Patent at 6:46.) On the other hand, including what amounts to a negative limitation in the construction, as Defendants propose, would risk confusion and might unduly limit what is

otherwise a general, readily understandable term. *See PACT XPP Techs.*, *AG v. Xilinx, Inc.*, No. 2:07-CV-563, 2011 WL 2469909, at \*18 (E.D. Tex. June 17, 2011) (Everingham, J.) (finding that the proposed "negative limitation is not required and will only confuse the jury"). For example, the Court's construction might be misinterpreted to mean that a "sensor" must be physically separate from an actuator or transducer. On balance, the term "sensor" on its face adequately distinguishes itself from an actuator or transducer. *See id.* The Court therefore rejects Defendants' proposal to include "distinct from an actuator or transducer" in the construction of "sensor."

Finally, the parties appear to essentially agree that a sensor "monitors or measures the state or status of a parameter or condition," as Plaintiff proposes. The specifications support such a reading, for example, as follows:

The plurality of remote devices typically use remote sensors and controllers to monitor and respond to various system parameters to reach desired results.

\* \* \*

[S]ystem parameters that vary across a range of values may be transmitted by transceiver 135 as long as data interface 205 and microcontroller 215 are configured to apply a specific code that is consistent with the input from sensor 140. As long as the code is known by the application server 110 or workstation 160, the target parameter may be monitored with the present invention.

### ('511 Patent at 1:48-51 & 9:37-44.)

At least one wireless transceiver is interfaced with a sensor, transducer, actuator or some other device associated with an application parameter of interest. In this regard, the term "parameter" is broadly construed and may include, but is not limited to, a system alarm condition, a system process variable, an operational condition, etc.

\* \* \*

As previously described and further illustrated in FIG. 2, a sensor 114 in

configuration with a household appliance 326 may be configured to monitor one or more appliance related status parameters.

\* \* \*

Additional information about the related system may also be provided within the lookup table, with particular functional codes associated with a corresponding condition or parameter, such as but not limited to, an appliance operating cycle, a power on/off status, a temperature, a position, and/or any other information that may be deemed appropriate or useful under the circumstances or implementation of the particular system.

('838 Patent at 3:49-54, 9:34-37 & 12:42-50.)

Defendants' proposal that a sensor "provides a data signal representing a monitored system parameter" is similar to Plaintiff's proposal but would be redundant in light of other language in the claims reciting a "sensor data signal." (*See* '511 Patent at Claims 1, 2 & 8; '838 Patent at Claim 40.)

The *ABB* Order construed "sensor" to mean "an equipment, program, or device that monitors or measures the state or status of a parameter or condition and provides information concerning the parameter or condition." 2012 WL 3112302, at \*17. The *ABB* Order noted that "the plain language of the claims dictate when a 'sensor' responds to physical conditions and/or generates an electrical output." *Id.* at \*16. This Court substantially agrees with the *ABB* Order but in light of the evidence discussed above, the Court omits "equipment" and "program" from the construction of "sensor."

The Court therefore construes "sensor" to mean "device that monitors or measures the state or status of a condition and provides information concerning the condition."

### E. "repeaters" ('511 Patent, Claim 2)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
"two-way wireless communication devices that operate in the manner recited in the claims"	"intermediate wireless devices that can receive original data messages and resend repeated data messages but do not send original data messages"

(Dkt. No. 511 at 12; Dkt. No. 522 at 11.)

## (1) The Parties' Positions

Plaintiff submits this Court should follow *Toro*, which construed this term after full briefing. (Dkt. No. 511 at 12.) Plaintiff argues that *Toro* considered the issue presented by Defendants, to wit, whether a repeater can generate its own original messages. (*Id.* at 13.) Plaintiff submits that *Toro* found repeaters need not "stand alone" but instead could be "integrated" with a remote device. (*Id.* (quoting *Toro* at 20).)

Defendants cite *ABB* and also cite disclosure in the specification of "repeaters" as standalone, intermediate devices. (Dkt. No. 522 at 11-12.) Nonetheless, Defendants emphasize that their proposal "rests not on the notion that repeaters are stand-alone devices, but on the clear import of the Specification that repeaters do not send original data messages." (*Id.* at 12.)

Plaintiff replies that Defendants are attempting to import "exemplary functions" of repeaters set forth in the specification. (Dkt. No. 525 at 6.)

At the September 26, 2012 hearing, Defendants agreed that the word "intermediate" could be omitted from their proposed construction.

#### (2) Analysis

Claim 2 depends from Claim 1, which recites, in relevant part (emphasis added; format modified):

- 1. A wireless communication network adapted for use in an automated monitoring system for monitoring and controlling a plurality of remote devices via a host computer connected to a wide area network, the wireless communication network comprising:
- a plurality of wireless transceivers having unique identifiers, each of the plurality of wireless transceivers configured to[:]
  - [a] receive a sensor data signal from one of the plurality of remote devices and *transmit an original data message* using a predefined wireless communication protocol, the original data message comprising the corresponding unique identifier and sensor data signal, and
  - [b] further configured to *receive the original data message* transmitted by one of the other wireless transceivers and *transmit a repeated data message* using the predefined communication protocol, the repeated data message including the sensor data signal and the corresponding unique identifier . . . .

Claim 1 thus recites transceivers that can both "transmit an original data message" and "transmit a repeated data message." In other words, the transceivers recited in Claim 1 can function as repeaters. Such a reading is supported by the specification. (*See* '511 Patent at 7:8-15.)

Claim 2, in turn, recites (emphasis added):

2. The wireless communication network of claim 1, further comprising a plurality of *repeaters* having unique identifiers, each of the plurality of repeaters in communication with at least one of the plurality of wireless transceivers and configured to *receive the original data message* transmitted by the at least one of the plurality of wireless transceivers and *transmit a repeated data message* using the predefined communication protocol, the repeated data message including the sensor data signal from the original data message and the unique identifier corresponding to the repeater.

Claim 2 differs from Claim 1 in that "repeaters" are not recited as being configured to transmit an original data message. Instead, the "repeaters," as their name implies, simply "receive the original data message" and "transmit a repeated data message." Moreover, the original data message is recited as having been "transmitted by the at least one of the plurality of wireless transceivers," which further highlights the distinction between transceivers and repeaters. This distinction between transceivers and repeaters, as demonstrated by the claims and supported by

the above-quoted written description, weighs in favor of construing "repeaters" to exclude transmission of original data messages. *Phillips*, 415 F.3d at 1314 ("Differences among claims can also be a useful guide in understanding the meaning of particular claim terms.")

Plaintiff cites *Toro*, which found as to the term "wireless transceiver":

There is no basis upon which to exclude "stand-alone" devices in construing the term "wireless transceiver." There was no prosecution disclaimer where the patentee distinguished the "wireless transceivers" of his invention from "stand-alone repeaters" of the prior art. Such a disclaimer would had to have been unambiguous and clear, and the prosecution history reveals neither.

*Toro* at 12. *Toro* thus concluded that the term "wireless transceiver" could encompass a "standalone" repeater. As to "repeaters," *Toro* found:

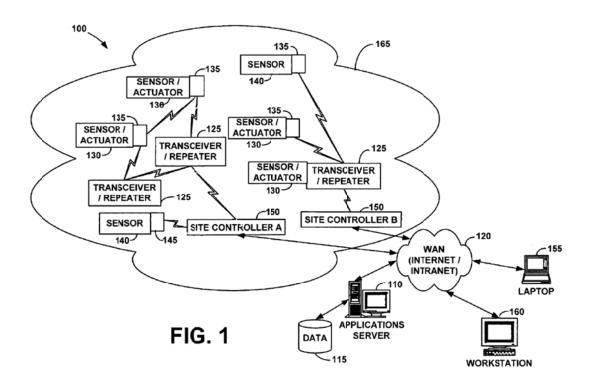
The parties agree that "repeaters" are two-way wireless communication devices. They disagree on the additional detail needed to construe this term. Specifically, [Plaintiff] proposes: "two-way wireless communication devices that operate in the manner recited in the claims." Toro's proffered construction is "stand alone two-way wireless communication devices that are not integrated with remote devices."

As explained earlier in the construction of "wireless transceivers," repeaters do not have to "stand alone." In addition, as shown in Figure 1 of the '511 patent, "repeaters" can be "integrated" with a remote device. Therefore, the term "stand alone" is not necessary nor does "not integrated with remote devices" add anything.

[Plaintiff's] construction will be adopted. It reflects both the parties' agreement and that the claims recite how the repeaters operate. Specifically, the claims state that "each of the repeaters is in communication with at least one of the plurality of wireless transceivers and configured to receive the original data message transmitted by at least one of the . . . wireless transceivers and transmit a repeated data message . . ."

*Toro* at 20-21. *Toro* thus relied on Figure 1 of the '511 Patent to find that a "repeater" need not be a "stand-alone" device.

Figure 1 illustrates several blocks with the words "Transceiver / Repeater" and labeled with reference numeral 125, one of which is illustrated as being coupled to a "Sensor/Actuator" that is labeled with reference number 130:



The associated written description discloses:

As is further illustrated in FIG. 1, automated monitoring system 100 may comprise a plurality of stand-alone wireless transceiver/repeaters 125. Each stand-alone wireless transceiver/repeater 125, as well as each wireless transceiver 135, may be configured to receive one or more incoming transmissions (transmitted by a remote transmitter 145 or transceiver 135) and to transmit an outgoing signal. This outgoing signal may be any wireless transmission signal, such as, for example, a low-power RF transmission signal, or a higher-power RF transmission signal. Alternatively, where a wired configur[ation] is employed, the outgoing signal may be transmitted over a conductive wire, fiber optic cable, or other transmission media. One of ordinary skill in the art will appreciate that if an integrated wireless communication device (e.g., a wireless transmitter 145, a wireless transceiver 135, or a wireless transceiver/repeater 125) is located sufficiently close to site controller 150 such that its output signal can be received by at least one site controller 150, the data transmission signal need not be

processed and repeated through either a wireless transceiver/repeater 125 or wireless transceivers 135.

('511 Patent at 5:36-56.) This description of "stand-alone wireless transceiver/repeaters 125," together with Figure 1, discloses that a "Transceiver / Repeater" can stand alone or can be coupled to a "Sensor / Actuator." This Court therefore agrees with *Toro* that a "repeater" need not stand alone. *Globetrotter*, 362 F.3d at 1381 ("A claim interpretation that excludes a preferred embodiment from the scope of the claim 'is rarely, if ever, correct.") (quoting *Vitronics*, 90 F.3d at 1583). This does not resolve, however, whether a "repeater" can send original data messages.

The preferred embodiment of Figure 1 could be viewed as permitting the term "repeaters" to encompass devices that can send original data messages because a "Transceiver / Repeater" is shown coupled with a "Sensor / Actuator." One could argue that otherwise the "Sensor / Actuator" shown coupled with the "Transceiver / Repeater" in Figure 1 would be unable to communicate with the network.

A better reading in light of the written description, however, is that the "Transceiver / Repeater" can include a repeater, or at least repeater functionality, that does not involve whatever sensor might be associated with the "Transceiver / Repeater":

Transceivers 135 that function in automated monitoring system 100 as both a repeater and an integrated transceiver have two unique addresses. One address indicates messages intended for the repeater; the second address indicates messages for the sensor 140. Data controller 215 evaluates the incoming message to determine which address the message contains, which function is desired, and acts accordingly.

('511 Patent at 7:8-15.)

On balance, this context provided by the written description justifies limiting "repeaters" to devices that do not send original data messages. Although negative limitations are generally disfavored, here such a limitation is necessary to distinguish "repeaters" from "wireless transceivers" as used in the claims. *PACT*, 2011 WL 2469909, at \*18 (finding that the proposed "negative limitation is not required and will only confuse the jury"). The Court nonetheless here reiterates that as found in *Toro*, a "repeater" need not be a stand-alone device.

Finally, such a construction comports with the *ABB* Order, which construed "repeaters" to mean "wireless devices that can receive the original data messages and resend repeated data messages but do not send the original data messages." 2012 WL 3112302, at \*20.

The Court therefore construes "repeaters" to mean "wireless devices that can receive original data messages and resend repeated data messages but that do not send original data messages."

# F. "repeated data message" ('511 Patent, Claims 1 and 8)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
"the repeated data message being a data message transmitted by a wireless transceiver that receives an original data message from one of the other wireless transceivers and includes:  (a) the corresponding unique identifier of the wireless transceiver that sent the original data message; and (b) the sensor data signal of the original data message"	"an unchanged original data message that is rebroadcast"

(Dkt. No. 511 at 14; Dkt. No. 522 at 12.)

The parties have reached agreement that this term does not require construction. (Dkt. No. 555, 9/21/2012 Notice of Amended Joint Claim Construction Chart, at 1.) The Court therefore does not construe this term.

# G. "distributed data monitoring and control system suitable for distinct residential automation applications" ('838 Patent, Claim 40)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
"Non-limiting preamble that does not require construction" apart from the constituent term "distinct residential automation applications"	"a data monitoring and control system that is designed to monitor and control residential systems that include a plurality of residential systems"

(Dkt. No. 511 at 16; Dkt. No. 522 at 14.)

The parties have reached agreement that this term does not require construction. (Dkt. No. 555, 9/21/2012 Notice of Amended Joint Claim Construction Chart, at 1.) The Court therefore does not construe this term.

## H. "distinct residential automation applications" ('838 Patent, Claim 40)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
"Non-limiting preamble that does not require construction. Alternatively, 'one or more applications that perform one or more functions for a residence."	"a plurality of applications that each perform different functions for a residence, such as monitoring/controlling appliances, meters, window shades, irrigation systems, security systems, lighting systems, HVAC <sup>1</sup> systems, and a pet feeder"

(Dkt. No. 511 at 17; Dkt. No. 522 at 17.)

## (1) The Parties' Positions

Plaintiff argues that the "meaning of this term is apparent from the plain language of the claim" and that "Defendants' proposal is unnecessarily limiting, by requiring that each distinct application must perform a different function." (Dkt. No. 511 at 17.) Plaintiff cites an embodiment that, in Plaintiff's view, "can include distinct applications that all relate[] to the function of lighting, e.g., on/off, timers, and dimming." (*Id.* (citing '838 Patent at 12:44-48).)

<sup>&</sup>lt;sup>1</sup> "HVAC" is an abbreviation for "Heating, Ventilation, and Air Conditioning."

Defendants respond that during prosecution, the patentee limited the meaning of the disputed term while distinguishing the "Williams" reference (United States Patent No. 6,384,722) as being limited to monitoring and controlling only one type of device. (Dkt. No. 522 at 15.)

Plaintiff replies that "Defendants' proposed construction is based on an over-reaching application of the doctrine of prosecution history disclaimer, under which Defendants appear to contend that virtually any argument made by the patentee during reexamination somehow applies directly to the preamble." (Dkt. No. 525 at 7.)

At the September 26, 2012 hearing, Plaintiff reiterated that Defendants' proposal should be rejected because a single "system" could nonetheless include multiple "applications." For example, Plaintiff argued that an HVAC system could have multiple "applications" associated with it, such as on or off, heat or cool, fan on or off, and temperature.

#### (2) Analysis

Claim 40 of the '838 Patent recites (emphasis added):

- 40. A distributed data monitoring and control system suitable for distinct residential automation applications, comprising:
- a first sensor configured to provide a first sensor data signal from a first local control system; and
- a first wireless communication device communicatively coupled to the first sensor, configured to receive the first sensor data signal from the first sensor; and configured to format and transmit a first encoded data signal;

wherein the first encoded data signal comprises a first wireless communication device identifier, and comprises a first function code mapped from the received first sensor data signal,

wherein the first function code is selected from a generic set of function codes configured for *distinct applications*, such that the first sensor data signal from the first local control system is mapped to a corresponding function code of the generic set of function codes,

wherein the first wireless communication device is configured to transmit the first encoded data signal over a wireless transmission media to a gateway communicatively coupled to a wide area network, and wherein the gateway is configured to receive and translate the first encoded data signal into a wide area network data transfer protocol for transmission to a computing device configured to collect, process, and store, the first encoded data signal.

As a threshold matter, because the constituent term "applications" is plural, the Court rejects Plaintiff's proposal that the disputed term should encompass "one or more." *See, e.g.*, *Leggett & Platt*, 285 F.3d at 1357 ("At the outset, the claim recites 'support wires' in the plural, thus requiring more than one welded 'support wire.").

As to whether the preamble is a limitation, in the recent reexamination proceedings Plaintiff distinguished the "Williams" reference, United States Patent No. 6,384,722, arguing:

Williams is not at all relevant since Williams does not relate to a distributed system suitable for residential automation applications as required by the pending claims, and Williams does not teach or suggest monitoring and/or controlling a host of residential automation systems.

. . .

The pending claims encompass a method for monitoring and controlling residential systems including *a host of residential automation systems*.

\* \* \*

[T]he present invention relates to residential monitoring and control for residential automation systems. . . . The present system is configured to simultaneously monitor and/or control, inter alia, appliances, meters, shades, irrigation, interior lights, exterior lights, HVAC, pet feeders, and personal alarm systems which are worn and activated by a user. The system described by Williams, on the other hand, is incapable of monitoring and controlling such a diverse system.

(Dkt. No. 522, Ex. C, 9/20/2010 Response, at 20 & 22-23 (pp. 152 & 154-155 of 299 of Defs.' Ex. C) (emphasis added).) Plaintiff thus distinguished the Williams reference based on "monitoring and controlling . . . a diverse system." (*Id.*) On balance, these constitute "definitive statements" that the term "distinct residential automation applications" in the preamble of Claim 40 is limiting. *See, e.g., Omega Eng'g*, 334 F.3d at 1324; *Typhoon Touch*, 659 F.3d at

1381 ("The patentee is bound by representations made and actions that were taken in order to obtain the patent.").

As to Plaintiff's argument that a single system may have multiple applications, what Plaintiff has characterized as "applications" are instead described by the specification as being functions, conditions, or parameters:

Additional information about the related system may also be provided within the lookup table, with particular functional codes associated with a *corresponding* condition or parameter, such as but not limited to, an appliance operating cycle, a power on/off status, a temperature, a position, and/or any other information that may be deemed appropriate or useful under the circumstances or implementation of the particular system.

\* \* \*

Another look-up table 525 may be used to associate function codes 425 (FIG. 4D) with the interpretation thereof. For example, a unique code may be associated by a look-up table 525 to identify *functions such as test, temperature, smoke alarm active, security system breach, etc.* 

'838 Patent at 13:39-46 & 17:46-51 (emphasis added).

At the September 26, 2012 hearing, Defendant Crestron Electronics, Inc. argued that the disputed term does not require distinct "systems" but does require distinct "applications." In other words, a single "system" could include multiple sub-systems, each of which performs a distinct function for a residence. Defendant X10 Wireless Technology, Inc. responded that Plaintiff's argument misconstrues the term "applications" because the terms "system" and "application" are used interchangeably in the patent. In other words, Defendant X10 Wireless Technology, Inc. argued that an "application" is not a function, condition, or parameter of a "system," as Plaintiff has argued, but rather is the system itself.

On one hand, this could be "a case where the patentee used different words to express similar concepts, even though it may be confusing drafting practice." *Innova/Pure Water*, 381 F.3d at 1120; *see Tehrani v. Hamilton Med., Inc.*, 331 F.3d 1355, 1361 (Fed. Cir. 2003) (finding that the "intrinsic evidence indicates that the patentee meant for [the] two terms ['indicative of' and 'representing'] to be interchangeable and to carry the same meaning within the claims").

On the other hand, "use of [two] terms in close proximity in the same claim gives rise to an inference that a different meaning should be assigned to each." *Bancorp Services, L.L.C. v. Hartford Life Ins. Co.*, 359 F.3d 1367, 1373 (Fed. Cir. 2004); *see Symantec*, 522 F.3d at 1289 ("[W]hen construing terms in the body of a claim, the general assumption is that different terms have different meanings"); *see also Becton, Dickinson & Co. v. Tyco Healthcare Group, LP*, 616 F.3d 1249, 1254 (Fed. Cir. 2010) ("Where a claim lists elements separately, the clear implication of the claim language is that those elements are distinct components of the patented invention.") (citations and internal quotation marks omitted).

In light of these principles, the best reading of Claim 40 is that the terms "system" and "application" are not interchangeable. Whereas the term "system" refers to a group of network elements, such as sensors and communication devices, the term "application" refers to the use or purpose to which the system is put, *e.g.*, lighting, irrigation, HVAC, *etc*.

Reading "distinct residential automation applications" to refer to systems fulfilling distinct applications for a residence is also consistent with disclosure in the specification of monitoring and controlling multiple, distinct residential "systems and devices":

Those skilled in the art will appreciate the *application* of the various devices deployed in a wireless network interface between a plurality of residential system sensors 114 and sensor/actuators 112 and various computing devices in

communication with a WAN 130 in a distributed home automation control system.

\* \* \*

Having generally described the architecture and operation of a DD[MC]S [(distributed data monitoring/control system)] 100 in accordance with the present invention with regard to FIG. 2, reference is now made to FIG. 3, which presents a schematic diagram illustrating multiple residential systems that may be coupled to the RF communication devices of the DD[MC]S 100 of FIG. 2. In this regard, a residence 300 may be configured with a plurality of exemplary systems and devices, such as but not limited to, a pet feeder 310, a HVAC system 312, an exterior lighting system 314, an interior lighting system 316, a security system 318, an irrigation system 320, a plurality of motorized window shades 322, a plurality of utility meters 324, as well as, a plurality of home appliances 326. As is illustrated in FIG. 3, each of the aforementioned systems and or devices may be integrated with one or more sensors 114 or alternatively one or more sensor/actuators 112, wherein each of the sensors 114 or sensor/actuators 112 are communicatively coupled with a RF communication device to permit data transmissions to and from the DD[MC]S 100 of FIG. 2.

('838 Patent at 6:36-53 & 9:14-32 (emphasis added).)

Thus, the finder of fact will be aided by construing "distinct residential automation applications" to refer not to distinct functions, parameters, or conditions within a particular type of automation system (such as within a particular lighting, irrigation, or HVAC system) but rather to distinct types of automation systems, as contemplated by the above-quoted portions of the specification and the prosecution history.

Finally, Defendants' proposed list of examples should be rejected because they are unnecessary and because of the risk those examples, being as specific as they are, might be perceived as limiting. At the September 26, 2012 hearing, Defendants were agreeable to the Court's suggestion of omitting the proposed list of examples from the construction.

The Court therefore hereby construes "distinct residential automation applications" to mean "plurality of applications, each of which serves a different automation purpose for a residence."

# I. "local control system" ('838 Patent, Claim 40)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
Plain and ordinary meaning	"a system that hosts application specific control system functions and generates
Alternatively, "a system for controlling local devices"	required control signals for appropriate distribution via a wide area network and local gateways to system sensor/actuators"

(Dkt. No. 511 at 18; Dkt. No. 522 at 16.)

The parties have reached agreement that this term does not require construction. (Dkt. No. 555, 9/21/2012 Notice of Amended Joint Claim Construction Chart, at 1.) The Court therefore does not construe this term.

# J. "gateway" ('838 Patent, Claim 40)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
Plain and ordinary meaning	"a device that translates and transfers communications between the wireless sensor
Alternatively, "equipment, program, and/or	network and a wide area network, and that
device capable of converting and further	includes a look-up table to assist in identifying
communicating information"	various devices transmitting data to the
	gateway, program code for evaluating
	incoming data and determining action to be
	taken, and a look-up table associating function
	codes with the interpretation thereof"

(Dkt. No. 511 at 19; Dkt. No. 522 at 16.)

#### (1) The Parties' Positions

Plaintiff submits that its proposal is the construction from *Datamatic*, which Judge Love also agreed with in the *ABB* Order. (Dkt. No. 511 at 20 (citing *Datamatic* at 15-18); 2012 WL 3112302, at \*22.) Plaintiff argues that the "claim language is clear on its face" and that "a person of ordinary skill in the art would readily understand the meaning of this term as it is used within the patents." (*Id.* (citing Ex. P, Attach. 2, *Microsoft Computer Dictionary* 232 (5th ed. 2002) ("A gateway both transfers information and converts it to a form compatible with the protocols used by the receiving network.")).) Plaintiff also argues claim differentiation as to Claims 46-50. (*Id.* at 21.)

Defendants respond that during reexamination, Plaintiff limited the term "gateway" while distinguishing the "Williams" reference based on "the function code employed in the presently claimed system and method and which is a feature utilized by the gateway of the presently claimed system and method." (Dkt. No. 522 at 17 (quoting Ex. C, 9/20/2010 Response, at 25 (p. 157 of 299 of Defs.' Ex. C)).) Defendants similarly cite Plaintiff's reliance on "the 'program code' and two 'look-up table' aspects of its gateway [to] distinguish[] it over the prior art." (*Id.*) Defendants urge that any claim differentiation argument based on Claims 46-50 cannot overcome the prosecution history. (*Id.* at 18.) Finally, Defendants argue that *Datamatic* is not persuasive because *Datamatic* did not consider the recent prosecution history cited here by Defendants and because the other patents at issue in *Datamatic*, the '692 Patent and the '661 Patent, "claim a different gateway from the '838 patent." (*Id.*)

Plaintiff replies that "the applicant's statements during reexamination simply described Figure 5 of the patent, and the elements contained therein, in greater detail" and that "the

applicant consistently described possible features of the gateway using permissive – not compulsory – language." (Dkt. No. 525 at 8.)

#### (2) Analysis

Although Plaintiff argues that this term should not be construed, the briefing demonstrates that the parties have a "fundamental dispute regarding the scope of a claim term," and the Court has a duty to resolve the dispute. *See O2 Micro*, 521 F.3d at 1362-63.

Claim 40 of the '838 Patent recites, in relevant part (emphasis added):

40. A distributed data monitoring and control system suitable for distinct residential automation applications, comprising:

a first sensor configured to provide a first sensor data signal from a first local control system; and

a first wireless communication device . . . configured to receive the first sensor data signal . . . and transmit a first encoded data signal;

wherein the first encoded data signal comprises a first wireless communication device identifier, and comprises a first *function code* mapped from the received first sensor data signal, . . .

wherein the first wireless communication device is configured to transmit the first encoded data signal over a wireless transmission media to a *gateway* communicatively coupled to a wide area network, and

wherein the *gateway is configured to receive and translate the first encoded data signal into a wide area network data transfer protocol* for transmission to a computing device configured to collect, process, and store, the first encoded data signal.

Plaintiff relies in part on *Datamatic*, which construed the term "gateway" in accordance with Plaintiff's current proposed construction in a Memorandum Opinion and Order entered in May 2011, four months before Plaintiff filed the reexamination Response that Defendants here rely upon. *Datamatic* therefore could not have addressed the arguments Defendants now present. In *ABB* in March 2012, Judge Love also preliminary agreed with Plaintiff's current proposed construction, but the defendants in *ABB* do not appear to have pursued limitations based on the reexamination Response, presumably because the '838 Patent was not at issue in

ABB. (See ABB at 5.) The ABB Order is likewise silent on the issue. See 2012 WL 3112302, at \*22. The ABB Order, which construed the disputed term in accordance with Plaintiff's proposal here, is thus of little persuasive weight in evaluating the prosecution history that is here at issue.

Turning first to the claims, Plaintiff argues claim differentiation, which is a doctrine counseling that the "presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." *Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325, 1342 (Fed. Cir. 2010) (quoting *Phillips*, 415 F.3d at 1315). Plaintiff applies the doctrine to Claims 46-50, which recite lookup tables:

- 46. The distributed data monitoring and control system of claim 40, wherein the mapping is performed by using a first *lookup table* which maps the first sensor data signal from the first local control system into the corresponding function code of the generic set of function codes.
- 47. The distributed data monitoring and control system of claim 46, further comprising:

a second sensor configured to provide a second sensor data signal from a second local control system; and

a second wireless communication device communicatively coupled to the second senor, configured to receive the second sensor data signal from the second sensor, and configured to format and transmit a second encoded data signal,

wherein the second encoded data signal comprises a second wireless communication device identifier, and comprises a second function code mapped from the received second sensor data signal,

wherein the second function code is selected from a generic set of function codes, such that the second sensor data signal from the second local control system is mapped to a corresponding function code of the generic set of function codes.

wherein the second wireless communication device is configured to transmit the second encoded data signal over the wireless transmission media,

wherein the second local control system is configured to use control system signals which are distinct from control signals of the first local control system,

wherein the mapping of the second sensor data signal is performed by using a second *lookup table* which maps the second sensor data signal from the second local control system into a corresponding function code of the generic set of function codes, and

wherein the second *lookup table* is different from the first *lookup table* to account for distinctions between the first local control system and the second local control system.

- 48. The distributed data monitoring and control system of claim 46, wherein the first *lookup table* maps at least the following four parameters into the generic set of function codes: temperature set, on/off, actual temperature, and air/heat.
- 49. The distributed data monitoring and control system of claim 46, wherein the first *lookup table* maps parameters into the generic set of function codes, and wherein the parameters are associated with at least the following devices: an appliance, a utility meter, a shade, irrigation, security, interior lights, exterior lights, and a heating, ventilation, and air conditioning (HVAC) system.
- 50. The distributed data monitoring and control system of claim 40, wherein the computing device is configured to use a first interpretive *lookup table* to interpret the first function code from the first encoded data signal, and wherein the first interpretive *lookup table* is associated with the first wireless communication device identifier of the first wireless communication device.

These claims include more limitations than simply the use of a lookup table, which dilutes Plaintiff's claim differentiation argument. *Kudlacek v. DBC, Inc.*, 25 F. App'x 837, 843 (Fed. Cir. Dec. 21, 2001) (noting that "[dependent] claim two also contains other limitations that differentiate it from claim one"); *accord Kemco Sales, Inc. v. Control Papers Co., Inc.*, 208 F.3d 1352, 1363 (Fed. Cir. 2000). Alternatively, to whatever extent the doctrine may be applicable, claim differentiation is overcome here by the other intrinsic evidence, as set forth below. *Cf. Edwards Lifesciences LLC v. Cook Inc.*, 582 F.3d 1322, 1331 (Fed. Cir. 2009) ("[C]laim differentiation is a rule of thumb that does not trump the clear import of the specification.").

During the recent reexamination proceedings, Plaintiff highlighted "look-up" tables and function codes as part of the "invention" (emphasis added):

The '838 Patent claims relate to a system and a cost-effective method for monitoring and controlling home automation devices remotely via a distributed wide-area network (WAN). More specifically, *the present claims* are directed to a computerized system for monitoring, reporting, and controlling household related

systems and system information via WAN *gateway* interfaces. The input and output signals to and from the various household devices may be communicated via appropriately configured RF transceivers and repeaters (where required) in communication with WAN *gateways*. Database servers in communication with the WAN store identification information related to each of the various transceivers along with appropriate codes suitable for a related application. It should be appreciated that, a portion of the information communicated includes data that uniquely identifies the sensors and/or actuators. Another portion of the data is a multi-bit code word that may be decipherable through a *look-up table* within either the WAN *gateway* or a WAN interconnected computer. *Distinct control system signals are mapped to function codes used by the present invention in order to provide customer access to control system data*. In this way, the system of *the present invention* can be integrated with present data collection and system controllers inexpensively, as customers will only have to add a data translator and a wireless transmitter or transceiver as the application demands.

When received by the application server, the transmitter identification number is used to access a *look-up table* that identifies, for example, the residence, the system, and the particular parameter assigned to that particular transmitter.

Additional information about the related system is provided within the *lookup table*, with particular "function codes" associated with a corresponding conditions or parameters for the identified class of devices, such as, but not limited to, an appliance operating cycle, a power on/off status, a temperature, a position, and/or any other information that may be deemed appropriate or useful under the circumstances or implementation for that class of device.

(Dkt. No. 522, Ex. C, 9/20/2010 Response, at 21 (p. 153 of 299 of Defs.' Ex. C).) These characterizations of the "invention" may be given some weight. *SciMed Life Sys., Inc. v.*Advanced Cardiovascular Sys., Inc., 242 F.3d 1337, 1343-44 (Fed. Cir. 2001) (noting "statements in the written description that define 'the invention'"). By themselves, however, they do not appear to amount to "definitive statements" that should limit the construction of the disputed term "gateway."

Nonetheless, Defendants have emphasized the following statements by Plaintiff during reexamination, in which Plaintiff distinguished the Williams reference, United States Patent No. 6,384,722:

The Examiner refers to Fig. 13 of Williams and alleges that communication server 1340 corresponds to the gateway of the present invention. With all due respect, Patent Owner disagrees. Element 1330 of Williams Fig. 13 is simply a bridge which funnels serial data from a base station 1300 to a communications server 1340. It might also be noted that the arrows indicating signal direction shows only signal being transmitted to the communication server 1340 but does not show any return command signals being sent to or received by the base station 1300.

In contrast to Williams, the gateway of the present invention as illustrated in Fig. 5 is quite different. Gateway 110 can be configured such that a memory 154 [sic, 524] includes a look-up table 525 which can assist in identifying the various communication devices transmitting data to the gateway. The memory 524 can also include a program code for controlling a CPU 522 so as to evaluate data in the incoming packet and determine what action needs to be taken. Another table in the gateway can be used to associate function codes with the interpretation thereof. The code may be associated at the gateway to identify functions such as test, temperature, smoke alarm active, security system breach, etc. The gateway may also include mechanisms to facilitate network based communications with remote computing devices.

Thus, it is urged that the Williams gateway is not anticipatory of the *gateway of* the instant invention. It would be evident to the skilled artisan that the function code employed in the presently claimed system and method and which is a feature utilized by the gateway of the presently claimed system and method is not used in the Williams gateway since there would be no need for a function code.

(Dkt. No. 522, Ex. C, 9/20/2010 Response, at 24-25 (pp. 156-157 of 299 of Defs.' Ex. C) (italics added; underlining as in original).) Although Plaintiff urges that it used permissive language, such as "can," in this above-quoted discussion, Plaintiff nonetheless relied upon the lookup tables and function codes to distinguish Williams from "the present invention." *Cf. Amazon.com*, 239 F.3d at 1351 ("A patent may not, like a 'nose of wax,' be twisted one way to avoid anticipation and another to find infringement.").

Further, the patentee repeatedly emphasized the importance of function codes as part of "the present claims," "the pending claims," and "the present invention":

Since the Williams disclosure is concerned only with the monitoring of an alarm, there is no need for a function code in order to identify the monitored system and the parameter associated with the monitored system.

. . .

The Williams disclosure lacks an important feature of *the present claims*, namely the function code. Absent some manner of encoding and mapping of the sensor signal to a particular monitored system, Williams cannot be extended to distributed systems and methods as encompassed by *the pending claims*.

\* \* \*

Simply converting voltage or amperage dat[a] into on or off determinations is not the same as mapping to a function code as required by the pending claims. It is urged that the present system function codes are clearly distinguishable from the data inputted into the data package in the Williams system.

\* \* \*

[T]he data which is transmitted by the Williams system is not the same as or similar to the function code data which are formatted by transceivers in *the present* invention and which is transmitted to remote computing devices by the gateway. The data transmitted by Williams are sensor signals which do not need to be associated with a function code as is the case for the system and method of *the present claims*.

(*Id.* at 23, 24 & 26 (pp. 155, 156 & 158 of 299 of Defs.' Ex. C) (emphasis added).) Finally, the patentee explained during reexamination that function codes are used in conjunction with lookup tables:

In the ['838] Patent, the claim 1 term "function code" is clearly defined (at least by implication) by the patentee in the specification.

\* \* \*

[A] function code, as defined by the ['838] Patent, is a set of bits that may be stored in a look-up table and corresponds to one or more functions."

(Id. at 18-19 (pp. 150-151 of 299 of Defs.' Ex. C.)

On balance, Plaintiff's Response during the recent reexamination contains "definitive statements made during prosecution" that limit the meaning of the disputed term "gateway."

Omega Eng'g, 334 F.3d at 1324. Plaintiff's reliance on function codes, program code, and look-up tables to distinguish the "gateway" from prior art should be given effect in the construction of the term. See Typhoon Touch, 659 F.3d at 1381 ("The patentee is bound by representations made and actions that were taken in order to obtain the patent.").

Defendants' proposal that the construction specify that the gateway "translates and transfers communications between the wireless sensor network and a wide area network" is unnecessary because Claim 40 itself recites that the "gateway" is "communicatively coupled to a wide area network" and "is configured to receive and translate the first encoded data signal into a wide area network data transfer protocol." Defendants' proposal in this regard is therefore rejected.

Thus, although the *ABB* Order construed "gateway" in the manner that Plaintiff has here proposed, the *ABB* Order did not address the prosecution history that is here at issue. Based on the foregoing analysis of the prosecution history, this Court reaches a different construction.

In sum, the Court hereby construes "gateway" to mean "device that is capable of converting and further communicating information and that includes: (1) a look-up table to assist in identifying various devices transmitting data to the gateway; (2) program code for evaluating incoming data and determining action to be taken; and (3) a look-up table associating function codes with the interpretation thereof."

K. "function code" ('838 Patent, Claim 40)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
Plain and ordinary meaning	"a code associated with a corresponding condition or parameter that allows monitoring
Alternatively, "a code corresponding to one or more functions"	of diverse devices in a system"

(Dkt. No. 511 at 21; Dkt. No. 522 at 18.)

## (1) The Parties' Positions

Plaintiff urges that "[b]ecause the patentee has not deviated from the term's plain and ordinary meaning, there is no need for the Court to construe this term." (Dkt. No. 511 at 22.)

Alternatively, Plaintiff argues Defendants' proposal should be rejected because "the concept of allowing monitoring of distinct applications is already recited in the claim language itself." (*Id.*) Plaintiff submits that "while the system may include 'diverse devices' in some embodiments, that is not a requirement in every case." (*Id.* at 23.) Plaintiff argues that because the Williams reference only disclosed monitoring of a single type of device with a single function, Williams had no need for a function code. (*Id.*) Plaintiff concludes that "the applicant merely distinguished the invention over the prior art based on the *presence* of function codes, and there is nothing in the intrinsic record to suggest that the term is used in a way that deviates from its plain and ordinary meaning." (*Id.* at 24.)

Defendants respond that during reexamination proceedings, Plaintiff "clearly told the USPTO that a code is only a 'function code' as claimed when the code contains information associating it with particular conditions or parameters that allow monitoring of diverse devices." (Dkt. No. 522 at 18-19.) During reexamination, Defendants argue, Plaintiff's expert, Mr. McAlexander, "distinguished prior art codes characterized by the USPTO as being function codes precisely because the prior art codes could not be used with distinct devices" and because prior codes were, for example, "mere status indicators (such as on/off codes)." (*Id.* at 19 (citing Ex. C, McAlexander Decl., at pp. 7-9 (pp. 9-11 of 299 of Defs.' Ex. C)).) Defendants submit that the USPTO rejected Plaintiff's arguments in this regard, and then Plaintiff "canceled all of

the original claims in favor of a set of new claims, including claim 40, that include the express requirement that the function code must be 'configured for distinct applications' to make the express claim language consistent with Mr. McAlexander's arguments." (Dkt. No. 522 at 20.) Defendants argue that this prosecution history contradicts Plaintiff's present argument, in this litigation, that the prior art did not teach function codes at all and that Plaintiff distinguished the prior art based on the mere presence of function codes. (*Id.* at 21.) Defendants conclude that "encoded data associated with an alarm, on/off status of a light, or other type of remote device is not a function code." (*Id.*)

Plaintiff replies that the claim language "already incorporates the concept of allowing monitoring of distinct applications – and there is no need to repeat that concept within the definition of 'function code.'" (Dkt. No. 525 at 9-10.) Plaintiff also counters that at the time it canceled the original claims, "the limitation of a function code being configured for distinct applications already appeared in the claims." (*Id.* at 9 (emphasis omitted).)

## (2) Analysis

Although Plaintiff argues that this term should not be construed, the briefing demonstrates that the parties have a "fundamental dispute regarding the scope of a claim term," and the Court has a duty to resolve the dispute. *See O2 Micro*, 521 F.3d at 1362-63.

Plaintiff argued during the recent reexamination that the '838 Patent itself defines "function code":

In the ['838] Patent, the claim 1 term "function code" is clearly defined (at least by implication) by the patentee in the specification.

\* \* \*

# [A] function code, as defined by the ['838] Patent, is a set of bits that may be stored in a look-up table and corresponds to one or more functions."

(Dkt. No. 522, Ex. C, 9/20/2010 Response, at 18-19 (pp. 150-151 of 299 of Defs.' Ex. C) (discussing '838 Patent at 4:53-67 & 15:50-60; citing '838 Patent at 6:3-9, 12:41-50, 13:38-46, 15:20-24, 15:29-34, 16:4-10, 17:40-51, 19:52-58 & 20:36-45) (emphasis as in original).)

The '838 Patent similarly discloses, in the Summary of the Invention:

*Distinct* control system signals may be mapped to function codes used by the present invention in order to provide customer access to control system data.

('838 Patent at 4:59-61 (emphasis added).) The Detailed Description of the Preferred Embodiments discloses, for example, the use of "functional codes" associated with conditions or parameters as well as the use of "unique function codes" to allow monitoring of diverse devices, as Defendants propose:

Additional information about the related system may also be provided within the lookup table, with particular *functional codes associated with a corresponding condition or parameter*, such as but not limited to, an appliance operating cycle, a power on/off status, a temperature, a position, and/or any other information that may be deemed appropriate or useful under the circumstances or implementation of the particular system.

\* \* \*

The data controller 420 may utilize a look-up table 425 to access *unique function codes* that are communicated in data packet 450c, along with a transceiver identification code 430b via RF, to a local gateway 110 and further onto a WAN 130 (FIG. 2). . . . It is significant to note that data packet 450c will include a *concatenation of the individual function codes* selected for each of the aforementioned input parameters, as well as, a data stream 450b that may be received from other closely located RF transmitters 115 and RF transceivers 113.

('838 Patent at 12:38-50 & 15:22-34 (emphasis added).)

In addition, Claim 40 itself recites (emphasis added): "the first function code is selected from a generic set of function codes *configured for distinct applications*, such that the first sensor

data signal from the first local control system is mapped to a corresponding function code of the generic set of function codes." Nonetheless, this recitation of a "set of function codes configured for distinct applications" does not necessarily mean that the term "function code" must itself be so limited. For further guidance, the Court turns to the prosecution history.

Defendants emphasize the declaration of Mr. Joseph C. McAlexander submitted to the USPTO by Plaintiff during reexamination:

- 21. ... [T]he Examiner has incorrectly applied the teaching by Williams of sensors for a plurality of like devices to that of the function code for distinct or diverse devices as claimed in the '838 Patent. Williams, contrary to the Examiner's interpretation, is totally lacking any teaching or suggestion of function codes as covered by the '838 Patent and as used in the '838 Patent claims. (See Ex Parte Reexamination 90/010,301, Office Action dated 12/02/2009, e.g., pp. 5-6 and 8-9, citing Williams at col. 9 l. 62 – col. 10 l. 5 and Figs. 9B and 10 referring to status byte 934). Williams, at best, formats an encoded data signal comprising information received as monitored data from sensors, such as sensors associated with alarms or other type [sic] remote devices. This information is repackaged (encoded) into the status byte 934 of Williams for transmission to the base station. I do not find anywhere in Williams a teaching of mapping received information with associated function code information to then format an encoded data signal comprising the function code as required by independent claim 1 of the '838 Patent, or wherein the encoded broadcast signal has a portion that contains the function code as required by independent claims 21 and 30 of the '838 Patent.
- 22. This lack of teaching by Williams of function code is clearly understood since Williams does not ever address function code. And Williams need not address function code since, in Williams, the disclosure is directed to street lamps or alarm systems, preferably over a large geographical area, having simple on/off, yes/no status detection as opposed to the '838 Patent invention providing control function variations based in part on the received, detected data signals from the sensors. Williams merely "passes" the information, as opposed to the claimed invention of the '838 Patent which provides a function code responsive to the information, namely received sensor data signal / sensed parameter.
- 23. While Williams makes gratuitous statements that control for street lights and alarms may be provided, a fair reading of Williams compels the conclusion that there is lack of enabling disclosure for a person of ordinary skill in the art to implement a system comprising, for example, a *combination of lights and other*

devices, such as alarms. The Williams specification is directed primarily to lights with adequate disclosure of such, but void of any complementary disclosure of other devices or the more complex *combination of other types of devices* with lights. Thus, there is not any need in Williams to accommodate a level of higher coding by using function codes for identification and control.

(Dkt. No. 522, Ex. C, 2/2/2010 McAlexander Decl., at pp. 8-9 (pp. 10-11 of 299 of Defs.' Ex. C) (emphasis added).)

Finally, Mr. McAlexander declared that "[t]hese function codes are then associated with, but not the same as, a condition or parameter that may relate to a specific sensor." (*Id.* at p. 7.) Further, as quoted above, Plaintiff argued that "function codes" correspond to functions. (Dkt. No. 522, Ex. C, 9/20/2010 Response, at 19 (p. 151 of 299 of Defs.' Ex. C).)

These statements by Plaintiff, and by Mr. McAlexander in support of Plaintiff, constitute "definitive statements made during prosecution" that a "function code" must enable monitoring and controlling of functions, conditions, or parameters of diverse devices in a system. *See Omega Eng'g*, 334 F.3d at 1324. Having distinguished the Williams reference on that basis, Plaintiff's statements during reexamination should be given effect in the Court's construction. *See Typhoon Touch*, 659 F.3d at 1381 ("The patentee is bound by representations made and actions that were taken in order to obtain the patent.").

Nonetheless, the limitation that function codes are for monitoring and controlling diverse devices is already part of a separate disputed term, "diverse generic set of function codes configured for distinct applications," discussed in subsection M., below. Defendants' proposed construction should therefore be rejected in that regard. The term "function code," by itself, thus refers to a code associated with a corresponding function or condition.

The Court therefore construes "function code" to mean "code corresponding to a function or condition."

L. "function code mapped from the received first sensor data signal" ('838 Patent, Claim 40)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
Plain and ordinary meaning	"deciphering the function code from a look-up table to identify a class of device associated
Alternatively, "associating a function code to a sensor data signal"	with the sensor data signal"

(Dkt. No. 511 at 24; Dkt. No. 522 at 22.)

#### (1) The Parties' Positions

Plaintiff argues that contrary to Defendants' proposed construction, "the function code is simply identified based on the received sensor data signal – no 'deciphering' of that function code is required by this claim limitation." (Dkt. No. 511 at 24.) Plaintiff also argues that Defendants improperly import "look-up table" and "class of device" limitations from the specification. (*Id.* at 25.) Plaintiff further argues claim differentiation as to Claim 46, which recites "wherein the mapping is performed by using a first lookup table." (*Id.*) Finally, Plaintiff argues that "while an embodiment of the patented system can accommodate various classes of . . . devices[,] the claim limitation at issue does not require (or even reference) the identification of the class of device."

Defendants respond that during reexamination, Plaintiff argued that the "ability to identify a class of device from among many different types of devices was key, and that this aspect is part of the mapping from the sensor data signal as claimed." (Dkt. No. 522 at 22.)

Plaintiff replies that during reexamination, Plaintiff's expert's reference to "a class of device" "simply reiterated the concept of the function code being used with distinct devices." (Dkt. No. 525 at 10.)

#### (2) Analysis

Although Plaintiff argues that this term should not be construed, the briefing demonstrates that the parties have a "fundamental dispute regarding the scope of a claim term," and the Court has a duty to resolve the dispute. *See O2 Micro*, 521 F.3d at 1362-63.

The disputed term, particularly the constituent term "mapped," requires construction in the context of the claim. Claim 40 of the '838 Patent recites, in relevant part (emphasis added):

40. A distributed data monitoring and control system suitable for distinct residential automation applications, comprising:

a first sensor configured to provide a first sensor data signal from a first local control system; and

a first wireless communication device . . . configured to receive the first sensor data signal . . . and transmit a first encoded data signal;

wherein the first encoded data signal comprises a first wireless communication device identifier, and comprises a first function code mapped from the received first sensor data signal,

wherein the first function code is selected from a generic set of function codes configured for distinct applications, such that the first sensor data signal from the first local control system is *mapped to a corresponding function code of the generic set of function codes*,

wherein the first wireless communication device is configured to transmit the first encoded data signal over a wireless transmission media to a gateway communicatively coupled to a wide area network, and

wherein the gateway is configured to receive and translate the first encoded data signal into a wide area network data transfer protocol for transmission to a computing device configured to collect, process, and store, the first encoded data signal.

The specification, in turn, uses the term "mapped" only once and does so with reference to "distinct" control system signals:

Distinct control system signals may be *mapped* to function codes used by the present invention in order to provide customer access to control system data.

('838 Patent at 4:59-61 (emphasis added).) Also, the term "associated" is used in a similar context:

When received by the application server 160 (FIG. 2), the transmitter identification number 430a may be used to access a look-up table that identifies, for example, the residence, the system, and the particular parameter assigned to that particular transmitter. Additional information about the related system may also be provided within the lookup table, with *particular functional codes* associated with a corresponding condition or parameter, such as but not limited to, an appliance operating cycle, a power on/off status, a temperature, a position, and/or any other information that may be deemed appropriate or useful under the circumstances or implementation of the particular system.

(*Id.* at 12:38-50 (emphasis added).)

Claim 40 and the specification thus disclose that the recited wireless communication device combines the first sensor data signal with "a first wireless communication device identifier" and "a first function code" such that the first encoded data signal identifies the communication device and the type of data signal. Plaintiff's proposed construction comports with this plain reading of the claim and the specification and should therefore be adopted.

Defendants rely on statements by Plaintiff during reexamination that "function codes are . . . associated with, but not the same as, a condition or parameter that may relate to a specific sensor" and that "[s]imply converting voltage or amperage dat[a] into on or off determinations is not the same as mapping to a function code *to distinguish functions of one device from another* as required by the pending claims." (Dkt. No. 522, Ex. C, 9/20/2010 Response, at 19 & 20 (pp. 151 & 152 of 299 of Defs.' Ex. C) (emphasis added).) Defendants urge that "part of what separates it from such a condition or parameter is the inclusion of information that identifies a class of device associated with the sensor data signal." (Dkt. No. 522 at 22 (emphasis added).)

Defendants have also relied upon Mr. McAlexander's Declaration in support of Plaintiff during reexamination, declaring that "in the '838 Patent, the function code points to the routine or operation to perform, whereas the applied prior art describes on/off type controls of devices of the same class." On balance, the patentee's statements regarding the "class of device" do not rise to the level of "definitive statements" so as to constitute a prosecution history disclaimer. See Omega Eng'g, 334 F.3d at 1324. Defendants' proposed limitation in this regard is also unnecessary and potentially confusing.

Finally, Defendants propose requiring a "look-up table" in the construction, but that limitation is adequately addressed as to the term "gateway" in subsection J., above.

The Court therefore hereby construes "function code mapped from the received first sensor data signal" to mean "function code associated with a sensor data signal."

M. "generic set of function codes configured for distinct applications" ('838 Patent, Claim 40)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
Plain and ordinary meaning	"a plurality of function codes with one or more
Alternatively, "a set of one or more function codes associated with one or more distinct applications"	first function codes assigned to a first application, and one or more second function codes, distinct from the first function codes, assigned for a second application distinct from the first application"

(Dkt. No. 511 at 25; Dkt. No. 522 at 23.)

## (1) The Parties' Positions

Plaintiff argues that Defendants' proposal fails because "Claim 40 does not even contemplate a 'first' and 'second' application." (Dkt. No. 511 at 26.) Plaintiff also argues claim

differentiation as to Claim 41, which recites "wherein the second function code is selected from a generic set of function codes." (*Id.*)

Defendants respond that "during reexamination [Plaintiff] forcefully argued that the configuration for devices of different classes was what separated its claims from the prior art." (Dkt. No. 522 at 23.) Defendants argue that their proposed construction is "consistent with [Plaintiff's] arguments distinguishing Williams because it was directed to a single application (such as only lighting, or only an alarm) and [with Plaintiff's] reference to Figure 3 which illustrates a system having many different applications controlled by the same system." (*Id.* at 25.) Defendants submit that "[t]he notion of distinct applications . . . is inherently plural":

Allowing a claim construction with [Plaintiff's proposed] "one or more" modifiers would enable the claim to read on a system having only a single function code associated with only a single application. That result is wholly contrary to the express claim language and completely inconsistent with [Plaintiff's] arguments during reexamination.

(*Id.* at 23.)

Plaintiff replies that "a term written in the plural form does not necessarily exclude the singular." (Dkt. No. 525 at 10.) Plaintiff also argues:

During reexamination, the applicant argued that the invention was distinguishable over the Williams reference because Williams was *incapable* of accommodating a system with different types of devices having different functions. Dkt. No. 511, Ex. O at 70-71. In contrast, the present invention *can* accommodate multiple types of devices; although it is not required to do so in *every embodiment*, as Defendants insist.

(*Id.* at 11.)

#### (2) Analysis

Although Plaintiff argues that this term should not be construed, the briefing demonstrates that the parties have a "fundamental dispute regarding the scope of a claim term," and the Court has a duty to resolve the dispute. *See O2 Micro*, 521 F.3d at 1362-63.

The parties' proposed constructions are similar except that Defendants seek to specify that the claimed "set" must include at least a first function code and a second function code, the second function code being assigned to a different application than the first function code.

On one hand, use of a plural term does not always mandate a plurality:

In the phrase "[plurality of . . .] projections with recesses therebetween," the use of "recesses" can be understood to mean a single recess where there are only two projections and more than one recess where there are three or more projections. Indeed, in the present context, if the patentees had wanted to require . . . more than one recess, it would have been natural to limit the claimed invention to an insert means with a "plurality of recesses."

Dayco, 258 F.3d at 1328; see Versa Corp. v. Ag-Bag Int'l Ltd., 392 F.3d 1325, 1330 (Fed. Cir. 2004) (as to the term "means . . . for creating air channels," noting that "in context, the plural can describe a universe ranging from one to some higher number, rather than requiring more than one item").

On the other hand, as discussed regarding the term "function code" in subsection K., above, Plaintiff distinguished prior art during reexamination by definitively stating that the '838 Patent claims a system for "distinct or diverse devices." (Dkt. No. 522, Ex. C, 2/2/2010 McAlexander Decl., at p. 8 (pp. 10 of 299 of Defs.' Ex. C).) Plaintiff argues that although it distinguished the Williams prior art reference on the basis that "the present invention *can* accommodate multiple types of devices," "it is not required to do so in *every embodiment*, as Defendants insist." (Dkt. No. 525 at 11.) Because Plaintiff relied upon the ability to

accommodate multiple types of devices to distinguish Williams, that ability is a limitation. Such is the only plausible reading of Mr. McAlexander's argument on Plaintiff's behalf that "the Examiner has incorrectly applied the teaching by Williams of sensors for a plurality of like devices to that of the *function code for distinct or diverse devices as claimed in the '838 Patent.*" (Dkt. No. 522, Ex. C, 2/2/2010 McAlexander Decl., at p. 8 (p. 10 of 299 of Defs.' Ex. C) (emphasis added).)

Thus, Plaintiff's proposed construction—which includes "one or more" and which could be read to cover a system with only one device or only one type of device—should be rejected as contrary to the prosecution history and the language in the disputed term itself that requires "distinct applications." Defendants' proposal of a "second application distinct from the first application" should therefore be adopted. Likewise, Defendants' proposal of "second function codes, distinct from the first function codes" properly conveys that because the second application is different from the first application, the function codes associated with the second application must be different from the function codes associated with the first application.

Finally, although Defendants propose including "plurality" in the construction, construing the term to require "one or more first function codes" and "one or more second function codes, distinct from the first functions codes" necessarily requires two or more function codes. Defendants' proposal of "a plurality of function codes" is therefore rejected as unnecessary.

The Court therefore construes "generic set of function codes configured for distinct applications" to mean "one or more first function codes assigned to a first application and

one or more second function codes, distinct from the first function codes, assigned to a second application distinct from the first application."

# N. "first sensor data signal from the first local control system is mapped to a corresponding function code of the generic set of function codes" ('838 Patent, Claim 40)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
Plain and ordinary meaning	Defendants willing to stipulate to Plaintiff's alternative construction
Alternatively, "[such that] the selected function code is chosen based on the first sensor data signal"	

(Dkt. No. 511 at 27; Dkt. No. 522 at 25.)

The parties have reached an agreed stipulated construction on this term. (*See* Dkt. No. 559.) The Court therefore hereby adopts the construction now agreed upon by the parties that "first sensor data signal from the first local control system is mapped to a corresponding function code of the generic set of function codes" means "[such that] the selected function code is chosen based on the first sensor data signal."

# O. "gateway is configured to receive and translate the first encoded data signal into a wide area network data transfer protocol" ('838 Patent, Claim 40)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
Does not require construction apart from the constituent term "gateway" discussed in subsection J., above, and is "entitled to plain & ordinary meaning."	"using program code to evaluate an incoming data packet and determine what action needs to be taken by consulting a look-up table and then convert the information in the incoming data packet to the network data transfer protocol"

(Dkt. No. 511 at 28; Dkt. No. 522 at 26.)

Defendants present the same arguments for this disputed term as for the constituent term "gateway," addressed in subsection J, above.

On balance, Defendants' proposal is duplicative of the construction of the constituent term "gateway," addressed in subsection J, above. The parties present no separate dispute as to the larger term "gateway is configured to receive and translate the first encoded data signal into a wide area network data transfer protocol." The Court therefore does not construe the larger term apart from the construction of the constituent term "gateway" in subsection J., above.

P. "means for receiving each of the original data messages and repeated data messages" ('511 Patent, Claim 8)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
Function:  "receiving each of the original data messages and the repeated data messages"	Willing to agree to Plaintiff's proposal
Structure: "a site controller 150 including an antenna 400, an RF transceiver 402, a central processing unit 404, and power supply 410, and equivalents thereof"	

(Dkt. No. 511 at 28; Dkt. No. 522 at 27.)

The parties have reached an agreed stipulated construction on this term. (*See* Dkt. No. 559.) The Court therefore hereby adopts the construction now agreed upon by the parties that "means for receiving each of the original data messages and repeated data messages" is a means-plus-function term, and that the function is "receiving each of the original data messages and the repeated data messages," and that the corresponding structure is "a site controller 150 including an antenna 400, an RF transceiver 402, a central processing unit 404, and power supply 410, and equivalents thereof."

# Q. "means for identifying, for each received message, the remote device associated with the corresponding sensor data signal" ('511 Patent, Claim 8)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
Function:	Structure:
"identifying, for each received message, the	"the memory 406 of the site controller,
remote device associated with the	including an 'Identify Remote Transceiver'
corresponding sensor data signal"	memory sector 416 and 'Identify Intermediate
	Transceiver' memory sector 418 and a lookup
Structure:	table 414 configured for identifying the various
"a site controller 150, including a central	remote and intermediate communication
processing unit 404, a power supply 410, a	devices used in generating and transmitting the
memory 406 with look-up table or tables 414	received data transmission"
and/or memory sectors for identifying a remote	
transceiver 416 and/or memory 406 configured	
with program code configured to identify a	
remote transceiver, and equivalents thereof"	

(Dkt. No. 511 at 30; Dkt. No. 522 at 27.)

## (1) The Parties' Positions

Plaintiff submits that its proposed construction was agreed upon by the parties in *Toro* and *Datamatic* and that Judge Love substantially agreed with Plaintiff's proposal in *ABB*. (Dkt. No. 511 at 30.) Plaintiff also submits that "the USPTO agreed this [means-plus-function] limitation was supported by the specification." (*Id.* (citing Ex. T, 3/3/2010 Office Action in Ex Parte Reexamination, at 4).) As to Defendants' proposal of identifying the "Intermediate Transceiver," Plaintiff argues that "the site controller need only identify the remote device associated with the corresponding sensor data signal – not the intermediate transceivers (if any) through which the signal may have traveled." (*Id.* at 31.) Plaintiff also argues that "Defendants improperly require the presence of *all* devices capable of performing the function, but the specification makes clear that various techniques may be used *in the alternative*." (*Id.*) Plaintiff further submits that Defendants "fail to identify even the most basic structures required to

perform the function – such as the site controller and a CPU." (*Id.* (citing '511 Patent at Fig. 4 & 10:50-11:7).)

As to "Identify Intermediate Transceiver' memory sector 418" in Defendants' proposed corresponding structure, Defendants respond:

The Specification does not describe the ['Identify Remote Transceiver'] memory sector 416 apart from the ['Identify Intermediate Transceiver'] memory sector 418. [Plaintiff] may not ignore disclosed structures for inclusion in this meansplus-function claim term; it must live with all of them.

(Dkt. No. 522 at 28.)

#### (2) Analysis

As a threshold matter, the parties agree that "means for identifying, for each message, the remote device associated with the corresponding sensor data signal" is a means-plus-function term subject to 35 U.S.C.  $\S 112, \P 6$ .

Claim construction of a means-plus-function limitation includes two steps. First, the court must determine the claimed function. Second, the court must identify the corresponding structure in the written description of the patent that performs that function.

Applied Med. Res. Corp. v. U.S. Surgical Corp., 448 F.3d 1324, 1332 (Fed. Cir. 2006) (citation omitted). The parties also appear to agree that the function is "identifying, for each received message, the remote device associated with the corresponding sensor data signal." The parties only dispute the corresponding structure.

Under section 112, paragraph 6, structure disclosed in the specification is "corresponding" structure only if the specification or the prosecution history clearly links or associates that structure to the function recited in the claim. A court may not import into the claim features that are unnecessary to perform the claimed function. Features that do not perform the recited function do not constitute corresponding structure and thus do not serve as claim limitations.

Northrop Grumman Corp. v. Intel Corp., 325 F.3d 1346, 1352 (Fed. Cir. 2003) (citations and internal quotation marks omitted).

#### The '511 Patent specification discloses (emphasis added):

A site controller 150 may comprise an antenna 400, an RF transceiver 402, a central processing unit (CPU) 404, memory 406, a network interface device, such as a network card 425, a digital subscriber line (DSL) modem, an integrated services digital network (ISDN) interface card, as well as other components not illustrated in FIG. 4, which may be configured to enable a TCP/IP connection to the WAN 120 (FIG. 1). Site controller 150 may also include a power supply 410 for powering the site controller 150. The power supply 410 may be one of many known power supplies. In addition, the site controller 150 may include an on-site input port 412, which allows a technician to communicate directly with site controller 150. Further information regarding the function, operation, and architecture of the site controller 150 may be found in commonly assigned U.S. patent application "System and Method for Controlling Communication Between a Host Computer and Communication Devices Associated with Remote Devices in an Automated Monitoring System," (Ser. No. 09/925,786) which is hereby incorporated in its entirety by reference.

The RF transceiver 402 may be configured to receive incoming transmissions via the antenna 400. Each of the incoming transmissions are consistently formatted in the message protocol as described below. The site controller 150 may be configured such that the memory 406 includes a look-up table 414 configured for identifying the various remote and intermediate communication devices used in generating and transmitting the received data transmission. As illustrated in FIG. 4, site controller 150 may include an "Identify Remote Transceiver" memory sector 416 and "Identify Intermediate Transceiver" memory sector 418. Programmed or recognized codes within memory 406 may also be provided and configured for controlling the operation of a CPU 404 to carry out the various functions that are orchestrated and/or controlled by the site controller 150. For example, memory 406 may include program code for controlling the operation of the CPU 404 to evaluate an incoming data packet to determine what action needs to be taken. In this regard, one or more look-up tables 414 may also be stored within the memory 406 to assist in this process. Furthermore, the memory 406 may be configured with program code configured to identify a remote transceiver or identify an intermediate RF transceiver. Function codes and RF transmitter and/or RF transceiver identifiers may all be stored with associated information within the look-up tables 414.

('511 Patent at 10:50-11:32.)<sup>2</sup>

Defendants argue that the "'Identify Remote Transceiver' memory sector 416 and 'Identify Intermediate Transceiver' memory sector 418" are both part of the corresponding structure because they are disclosed together. ('511 Patent at 11:17-18.) Specifically, Defendants argue that "[s]imply because that claim recites only identifying a remote, and not an intermediate, device, does not mean that the structure corresponding to the claim language lacks the 'Identify Intermediate Transceiver' memory sector 418." (Dkt. No. 522 at 28.)

Defendants have presented no authority for the proposition that where structures are consistently disclosed together in the specification, those structures must all be part of the corresponding structure, regardless of whether they are all necessary to perform the recited function. The claimed function is identifying the remote device, not the intermediate device. Thus, the corresponding structure should include only those structures necessary for identifying the remote device, not the intermediate device. *See, e.g., Northrop Grumman*, 325 F.3d at 1352; *Golight, Inc. v. Wal-Mart Stores, Inc.*, 355 F.3d 1327, 1334-35 (Fed. Cir. 2004) (finding certain "structures . . . superfluous to our claim construction analysis because they are not required for performing the claimed function").

Finally, the Court also considers the construction reached by the *ABB* Order that the corresponding structure for this means-plus-function term is: "a site controller 150, including a central processing unit 404, a power supply 410, a memory 406 with look up table or tables 414

<sup>2</sup> Although this passage incorporates-by-reference United States Patent Application No. 09/925,786 (which issued as United States Patent No. 7,650,425) regarding "[f]urther information regarding the function, operation, and architecture of the site controller 150," neither Plaintiff nor Defendants have cited that patent, and upon its own review the Court finds nothing

for identifying a remote transceiver and/or memory sectors 416 for identifying a remote transceiver and equivalents thereof." 2012 WL 3112302, at \*31.

On balance, the Court agrees with the *ABB* Order for the reasons stated therein and based on the above-quoted passage from the specification. *See id.* at \*27-\*31.

The Court therefore finds that "means for identifying, for each message, the remote device associated with the corresponding sensor data signal" is a means-plus-function term, that the function is "identifying, for each received message, the remote device associated with the corresponding sensor data signal," and that the corresponding structure is "a site controller 150, including the following and equivalents thereof: (1) a central processing unit 404; (2) a power supply 410; and (3) a memory 406 with look up table(s) 414 for identifying a remote transceiver and/or memory sectors 416 for identifying a remote transceiver."

R. "scalable address" ('492 Patent, Claim 1)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
Does not require construction – entitled to plain and ordinary meaning.	"an address having a varying number of bytes dependent upon the intended recipient"
Alternatively, "an address that is variable based on the size and complexity of the system"	Alternatively: "an address that has a variable size based on the size and complexity of the system"

(Dkt. No. 545 at 3; Dkt. No. 546 at 3.)

#### (1) The Parties' Positions

Plaintiff argues that the specification defines this term. (Dkt. No. 545 at 3 (citing '492 Patent at 9:59-61) ("The 'to' address 700 can indicate the intended recipient of the packet. This address can be scalable from one to six bytes based upon the size and complexity of the system.") Plaintiff submits its proposal is also consistent with Figure 8 of the '492 Patent. (*Id.*)

Plaintiff also argues that the ABB court rejected Defendants' first proposed construction, which adds improper limitations "that the address can only be varied by number of bytes" and "that the number of bytes depends on the recipients." (Id. at 5.) As to Defendants' alternative proposal, Plaintiff argues that Defendants' improperly seek to limit the term "to varying only in size," which "excludes a preferred embodiment" wherein the "scalable address" "can be varied in size as well as content." (*Id.* (citing '492 Patent at 9:59-10:1, 11:17-29 & Fig. 8).)

Defendants<sup>3</sup> respond that their first proposed construction is derived from the specification ('492 Patent at 10:2-4) and that their second proposed construction was the construction reached in the ABB Order. (Dkt. No. 546 at 3.) Defendants also respond that the construction reached in ABB supports rejecting Plaintiff's primary proposal that this term need not be construed. (Id.) Defendants further respond that Plaintiff's alternative proposed construction is "devious" because Plaintiff's proposal "would cover a fixed-length address" and would effectively write the limitation out of the claim. (Id. at 4). Defendants submit that ABB expressly rejected Plaintiff's argument that a fixed-length address would still be "scalable," noting that Plaintiff was conflating "scalable" with "variable." (Id.) Finally, Defendants argue that the embodiment cited by Plaintiff "does not describe a fixed-length address" and in fact supports Defendants' proposed constructions. (*Id.* at 4-5.)

## Plaintiff replies:

. . . Figure 8 is an exemplary embodiment, which cannot be used to narrow the claims. See, e.g., CollegeNet [Inc. v. ApplyYourself, Inc.], 418 F.3d [1225,] 1231 [(Fed. Cir. 2005)] ("this court will not at any time import limitations from the

<sup>&</sup>lt;sup>3</sup> Only Defendant Crestron Electronics, Inc. has responded as to the '492 Patent because the '492 Patent is not asserted against Defendant X10 Wireless Technology, Inc. (Dkt. No. 546, at 1.) For the sake of simplicity, the Court refers to Defendant Crestron Electronics, Inc.'s arguments and proposed constructions as being those of "Defendants."

specification into the claims"). Furthermore, Figure 8 illustrates various exemplary byte assignments in the "to" address – which can be used in a **variety** of combinations, not just a 4-byte or 6-byte address, as Crestron erroneously alleges. Dkt. No. 511, Ex. D at Col. 3, Il. 13-14 ("Fig. 8 is a table illustrating various "to" addresses["]). The specification makes this clear by describing how each byte may be used to identify a particular device or group of devices. Dkt. No. 511, Ex. D at Col. 11, Il. 19-29; *see also* Col. 9, I. 59 – Col. 10, I. 4 ("The first byte (Byte 1) can indicate the device type. The second byte (Byte 2) can indicate the manufacturer or the owner...."). Thus, the address can vary in content without varying in size, and vice versa, depending on the system needs. This further supports [Plaintiff's] position that the address can vary in both size and content.

(Dkt. No. 522 at 4-5.)

At the September 26, 2012 hearing, Plaintiff argued that "scalable" in this term can refer to scaling the number of intended recipients. For example, Plaintiff argued that whereas prior art systems were limited to addressing a message to one recipient or a few recipients, the "scalable address" can be modified to accommodate a large number of recipients.

#### (2) Analysis

Although Plaintiff argues that this term should not be construed, the briefing demonstrates that the parties have a "fundamental dispute regarding the scope of a claim term," and the Court has a duty to resolve the dispute. *See O2 Micro*, 521 F.3d at 1362-63.

The *ABB* Order construed "scalable address" to mean "an address that has a variable size based on the size and complexity of the system." 2012 WL 3112302, at \*12. Judge Love considered Plaintiff's arguments and rejected them. *Id.* at \*12-\*13. Judge Love also considered and rejected the defendants' proposal to limit the construction to define scalability in terms of bytes. *Id.* at \*13. This Court reaches the same conclusions for the same reasons.

The only remaining issue is whether to limit the construction to being "dependent upon the intended recipient," as Defendants propose. (Dkt. No. 546 at 5 (citing '492 Patent at 11:17-29 & Fig. 8).) The passage relied upon by Defendants discloses:

FIG. 8 sets forth a preferred embodiment of the "to" address byte assignment in accordance with an embodiment of the present invention. As shown in FIG. 8, the "to" address consists of six bytes. The first byte (Byte 1) can indicate the device type. The second byte (Byte 2) can indicate the manufacturer or the owner. The third byte (Byte 3) can be a further indication of the manufacturer or owner. The fourth byte (Byte 4) can either indicate that the message is for all devices, or that the message is for a particular device. If the message is for all devices, the fourth byte can be a particular code. If the message is for a particular device, the fourth, fifth, and sixth bytes (Byte 5 and Byte 6) can be a unique identifier for the particular devices.

('492 Patent at 11:17-29.) Figure 8 is reproduced herein:

# FIG. 8

"To Address	Byte Assignment:
MSB - Byte 1 Device Type	FF-F0 (16) - Broadcast All Devices (1 Byte Address) EF-1F (224) - Device Type Base (2 to 6 Byte Address) 0F-00 (16) - Personal Transceiver Identification (6 Byte Address)
Byte 2 Mfg./Owner ID	FF-F0 (16) - Broadcast all Devices (Byte 1 Type) (2 Byte Broadcast Address) EF-00 (240) - Mfg./Owner Code Identification Number
Byte 3 Mfg./Owner Extension ID	FF-F0 (16) - Broadcast all Devices (Byte 1 & Byte 2 Type) (3 Byte Broadcast Address) EF-00 (240) - Device Type/Mfg./Owner Code ID Number
Byte 4	FF-F0 (16) - Broadcast all Devices (Byte 1 & Byte 2 Type) (4 Byte Broadcast Address) EF-00 (240) - ID Number
Byte 5	(FF-00) 256 - Identification Number
Byte 6	(FF-00) 256 - Identification Number

On balance, Defendants have not sufficiently shown that the above-quoted passage or Figure 8 *require* that the byte size must vary "dependent upon the intended recipient." Defendants' proposal in that regard is rejected.

The Court therefore construes "scalable address" to mean "an address that has a variable size based on the size and complexity of the system."

# S. "remote device" ('492 Patent, Claims 1 and 6)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
Does not require construction – entitled to	"two or more devices, of which at least one
plain and ordinary meaning.	includes a sensor"
Alternatively, "one or more devices that are	
monitored and/or controlled"	

(Dkt. No. 545 at 6; Dkt. No. 546 at 5.)

The parties cite their briefing on the same term as to the '511 Patent and the '838 Patent. *Id.* Defendants also cite additional support in the '492 Patent and note that the '838 Patent is incorporated by reference into the '492 Patent. (Dkt. No. 546 at 5-6 (citing '492 Patent at 1:12-15, 1:32-34 & Figs. 2-5).)

The Court here construes "remotes devices" in the '492 Patent consistent with its construction of "remote devices" in the '511 Patent, addressed in subsection A. above. Because the term appears in Claims 1 and 6 of the '492 Patent as "remote device" rather than a "plurality of remote devices," as in the '511 Patent, the Court hereby construes "remote device" in Claims 1 and 6 of the '492 Patent to mean "one or more devices, at least one of which includes a sensor."

### T. "command indicator comprising a command code" ('492 Patent, Claim 1)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
Does not require construction – entitled to plain and ordinary meaning.	None; indefinite under 35 U.S.C. § 112
Alternatively, "an indicator for specifying a command that comprises a code"	

(Dkt. No. 545 at 7; Dkt. No. 546 at 6.)

#### (1) The Parties' Positions

As support that no construction is required, Plaintiff cites the declaration of its expert, Dr. Kevin Almeroth. (Dkt. No. 545 at 7-8 (citing Dkt. No. 545-1 at ¶¶ 7-10).) Plaintiff also cites the specification. (*Id.* at 7 (citing '492 Patent at 2:51-52, 7:30-38, 10:25-46, 11:40-67, Fig. 7 & Fig. 9).) Plaintiff argues that this term is not indefinite because it consists of "commonly-used words having a meaning that is apparent to a person of ordinary skill in the art" and because "the specification provides guidance as to the meaning of [the] term." (*Id.* at 9.) Plaintiff further notes that the examiner cited "command indicator comprising a command code" when the '492 Patent was allowed. (*Id.* at 8 (citing 2/11/2009 Statement of Reasons for Allowance, Dkt. No. 545 at Ex. 3).) Plaintiff argues that the term is not indefinite because the examiner, who is presumed to be a person of ordinary skill in the art, was able to understand the term. (*Id.* at 8-9.)

Defendants argue this term is indefinite because "[n]owhere does the '492 Patent specification make use of the terms "command indicator" or "command code." (Dkt. No. 546 at 7.) Further, "there is nothing in the specification that would indicate which of [the command-related] concepts [disclosed in the specification] would be the claimed 'command indicator' and which would be the 'command code' included within the 'command indicator.'" (*Id.*)

Defendants also note that Claim 1 compounds the confusion by reciting "a command indicator" twice, and "it is unclear what the difference is." (*Id.* at 8.) Finally, Defendants argue that within the disputed term, "the distinction between what is a 'command indicator' and what comprises the included 'command code' is a complete mystery." (*Id.*)

Plaintiff replies that "[p]ut simply, a data packet described in the invention can include a section for a command indicator, which in turn can include a command code." (Dkt. No. 550 at 6 (citing '492 Patent at 11:45-50).) Plaintiff also submits the Supplemental Declaration of Dr. Kevin Almeroth as evidence that persons of ordinary skill in the art "would be readily familiar with the concept of using codes to indicate commands." (Dkt. No. 550-1 at ¶¶ 4-8.)

At the September 26, 2012 hearing, Defendants also highlighted the presumption that "the use of . . . different terms in the claims connotes different meanings." *CAE Screenplates Inc. v. Heinrich Fiedler GMBH & Co.. KG*, 224 F.3d 1308, 1317 (Fed. Cir. 2000).

#### (2) Analysis

Indefiniteness is a "legal conclusion that is drawn from the court's performance of its duty as the construer of patent claims." *Exxon Research & Eng'g Co. v. U.S.*, 265 F.3d 1371, 1376 (Fed. Cir. 2001) (citation omitted). A finding of indefiniteness must overcome the statutory presumption of validity. *See* 35 U.S.C. § 282. That is, the "standard [for finding indefiniteness] is met where an accused infringer shows by clear and convincing evidence that a skilled artisan could not discern the boundaries of the claim based on the claim language, the specification, and the prosecution history, as well as her knowledge of the relevant art area." *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1249-50 (Fed. Cir. 2008).

In determining whether that standard is met, i.e., whether the claims at issue are sufficiently precise to permit a potential competitor to determine whether or not

he is infringing, we have not held that a claim is indefinite merely because it poses a difficult issue of claim construction. We engage in claim construction every day, and cases frequently present close questions of claim construction on which expert witnesses, trial courts, and even the judges of this court may disagree. Under a broad concept of indefiniteness, all but the clearest claim construction issues could be regarded as giving rise to invalidating indefiniteness in the claims at issue. But we have not adopted that approach to the law of indefiniteness. We have not insisted that claims be plain on their face in order to avoid condemnation for indefiniteness; rather, what we have asked is that the claims be amenable to construction, however difficult that task may be. If a claim is insolubly ambiguous, and no narrowing construction can properly be adopted, we have held the claim indefinite. If the meaning of the claim is discernible, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree, we have held the claim sufficiently clear to avoid invalidity on indefiniteness grounds. . . . By finding claims indefinite only if reasonable efforts at claim construction prove futile, we accord respect to the statutory presumption of patent validity . . . and we protect the inventive contribution of patentees, even when the drafting of their patents has been less than ideal.

Exxon, 265 F.3d at 1375 (citations and internal quotation marks omitted).

Although Plaintiff argues that this term should not be construed, the briefing demonstrates that the parties have a "fundamental dispute regarding the scope of a claim term," and the Court has a duty to resolve the dispute. *See O2 Micro*, 521 F.3d at 1362-63.

Claim 1 of the '492 Patent recites (emphasis added):

- 1. In a communication system to communicate command and sensed data between remote devices, the system comprising:
- a receiver address comprising a scalable address of at least one remote device:
  - a command indicator comprising a command code;
  - a data value comprising a scalable message; and
- a controller associated with a remote wireless device comprising a transceiver configured to send and receive wireless signals, the remote device configured to send a preformatted message comprising the receiver address, a *command indicator*, and the data value via the transceiver to at least one other remote device.

The specification does not disclose a "command indicator" or a "command code." The specification does disclose "commands," "command signal," "command data," "command number," and "command byte" (emphasis added):

To successfully communicate between the transceiver(s) and the gateway interface, a preferred embodiment of the present invention can receive a plurality of RF signal transmissions containing a packet protocol via a preferred embodiment of data structures that include sender and receiver identifiers, a description of the packet itself, a message number, *commands*, data, and an error detector. The data structure can be integrated with alternate data communication protocols for use with many other communication systems and networks.

\* \* \*

The data interface 525 may be configured to receive the data signal and transmit a *command signal*. In those situations where the data interface 525 has received an analog data signal, the data interface 525 may be configured to convert the analog signal into a digital signal before forwarding a digital representation of the data signal to the data controller 525. Similarly, when the data controller 535 forwards a digital representation of a *command signal*, the data interface 525 may be configured to translate the digital *command signal* into an analog voltage suitable to drive the actuator 520.

\* \* \*

For each of the remote devices to communicate, there needs to be a standard enabling each device to understand a message. FIG. 7 sets forth a format of a data packet protocol in accordance with a preferred embodiment of the present invention. All messages transmitted within the system consist of a "to" address 700, a "from" address 710, a packet number 720, a number of packets in a transmission 730, a packet length 740, a message number 750, a *command number* 760, any data 770, and a check sum error detector (CKH 780 and CKL 790).

\* \* \*

The next section is the *command byte* 760 that requests data from the receiving device as necessary. There can be two types of *commands*: device specific and not device specific. Device specific *commands* can control a specific device such as a data request or a change in current actuator settings. A number of *commands* are not device specific. Such *commands* are for example, but not limited to, a ping, an acknowledge, a non-acknowledgement, downstream repeat, upstream

repeat, read status, emergency message, and a request for general data, among others. General data may include a software version number, the number of power failures, and/or the number of resets.

The data 770 section may contain data as requested by a specific *command*. The requested data can be many values. By way of example, test data can be encoded in ASCII (American Standard Code for Information Interchange) or many other encoding systems. The data section of a single packet can be scalable up to 109 bytes. When the requested data exceeds 109 bytes, the integrated transceiver can divide the data into appropriate number of sections and concatenates [sic] the series of packets for one message using the packet identifiers as discussed above.

\* \* \*

Having described a general message structure in accordance with an embodiment of the present invention, reference is made to FIG. 9. FIG. 9 illustrates three sample messages. The first message 910 illustrates the broadcast of an emergency message "FF" from a central server with an address "0012345678" to a[n] integrated transceiver with an address of "FF."

The second message 920 illustrates how the first message might be sent to a stand-alone transceiver. Emergency message "FF" from a central server with address "00123456578" can be first sent to stand-alone transceiver "F[0]."

The second message contains additional *command data* "A000123456" that may be used by the system to identify further transceivers to send the signal through on the way to the destination device.

The third message 930 illustrated in FIG. 9 illustrates how the message protocol of the present invention may be used to "ping" a remote transceiver to determine transceiver health. For example, source unit "E112345678" may originate a ping request by sending *command* "08" to a transceiver identified as "A012345678." The response to the ping request can be as simple as reversing the "to address" and the "from address" of the *command* such that a healthy receiver will send a ping message back to the originating device. A system in accordance with a preferred embodiment of the present invention may be configured to expect a return ping within a specific time period. Operators of the present invention could use the delay between the ping request and the ping response to model system loads and to determine if specific system parameters might be adequately monitored and controlled with the expected feedback transmission delay of the system.

Returning to FIG. 2, the local gateway 210 can act as a local communications master in a system, such as system 200. With the exception of emergency

messages, the local gateway 210 usually initiates communications with any remote transceivers (either stand-alone 211, 213, 215, 221 or integrated 212, 214, 216, 224). The remote transceivers then respond based upon the *command* received in the message.

('492 Patent at 2:46-52, 7:28-38, 9:49-58, 10:25-46 & 11:30-67; *id.* at Fig. 7 & Fig. 9.) A fair reading is that "command code" in Claim 1 refers to the "command number" disclosed in the specification (*id.* at 9:56) and illustrated in Figure 9:

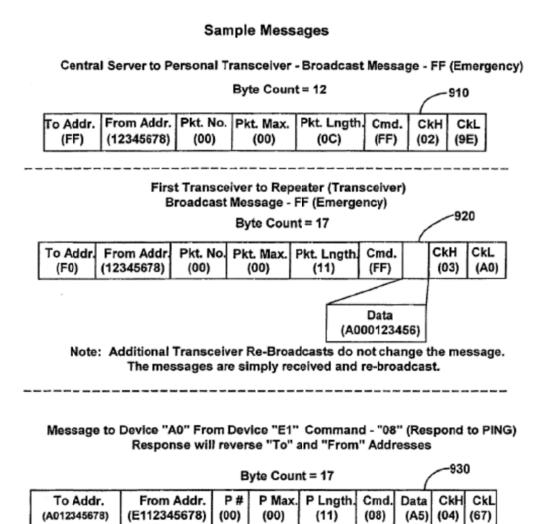


FIG. 9

Figure 9 illustrates command codes "FF" for "Emergency" and "08" for "Respond to PING." Thus, Figure 9 and the associated description teach that the "command number" can include letters (which the parties explained at the September 26, 2012 hearing is part of a hexadecimal format), which perhaps explains why the patentee used "command code" in the claims rather than "command number." Indeed, that portion of the packet is disclosed in at least one instance, quoted above, as containing a "command byte." (*Id.* at 10:25-26.) Similarly, a person of ordinary skill in the art would read the broader term "command indicator" to refer to the portion of the packet that contains the command code as well as any associated "command data," which is illustrated in Figure 9 as being separate from the command code. (*Id.* at 11:40-44.) Such a reading of the constituent term "indicator" also comports with usage of "indicate," "indicates," and "indication" in the specification as meaning something that specifies:

The "to" address 700 can *indicate* the intended recipient of the packet. This address can be scalable from one to six bytes based upon the size and complexity of the system. By way of example, the "to" address 700 can *indicate* a general message to all transceivers, to only the stand-alone transceivers, or to an individual integrated transceiver. In a six byte "to" address, the first byte *indicates* the transceiver type to all transceivers, to some transceivers, or a specific transceiver. The second byte can be the identification base, and bytes three through six can be used for the unique transceiver address (either standalone or integrated). The "to" address 700 can be scalable from one byte to six bytes depending upon the intended recipient(s).

\* \* \*

The packet number 720, the packet maximum 730, and the packet length 740 can be used to concatenate messages that are greater than 128 bytes. The packet maximum 730 can *indicate* the number of packets in the message. The packet number 720 may be used to *indicate* a packet sequence number for a multiple-packet message.

\* \* \*

While the message *indicates* specific byte length for each section, only the order of the specific information within the message is constant. The byte position number in individual transmissions can vary because of the scalability of the "to" address, the command byte, and the scalability of the data.

\* \* \*

FIG. 8 sets forth a preferred embodiment of the "to" address byte assignment in accordance with an embodiment of the present invention. As shown in FIG. 8, the "to" address consists of six bytes. The first byte (Byte 1) can *indicate* the device type. The second byte (Byte 2) can *indicate* the manufacturer or the owner. The third byte (Byte 3) can be a further *indication* of the manufacturer or owner. The fourth byte (Byte 4) can either *indicate* that the message is for all devices, or that the message is for a particular device. If the message is for all devices, the fourth byte can be a particular code. If the message is for a particular device, the fourth, fifth, and sixth bytes (Byte 5 and Byte 6) can be a unique identifier for the particular devices.

(*Id.* at 9:59-10:4, 10:11-16, 11:1-5 & 11:17-29 (emphasis added).) Finally, this reading of the specification also comports with Claim 22 of the '492 Patent, which uses the term "indicating" when referring to a "command" as well as when referring to, for example, byte length of a packet and the total number of packets in a message (emphasis added):

22. In a system for controlling geographically diverse devices from a central location, a communications device comprising:

means for dynamically sending and receiving messages, wherein the sent messages comprise commands and the received messages comprise responses to the commands, wherein the message comprises at least one means for packeting a message;

a means for communicating information, the communicating means comprising: means for receiving messages; means for preparing responses to the received message; and means for sending the response message; wherein each communicating means has a unique identifying address; and

wherein the packeting means comprises: means for identifying intended recipients; means for identifying a sender; means for *indicating* a command; means for data transfer; means for *indicating* potential error; means for *indicating* a byte length of a packet; means for *indicating* a total number of packets in a message; means for identifying a message; means for alerting a recipient to an incoming packet; and means for *indicating* an end of a packet.

See, e.g., Phillips, 415 F.3d at 1314 ("Because claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims."); accord Research Plastics, Inc. v. Fed. Packaging Corp., 421 F.3d 1290, 1295 (Fed. Cir. 2005); Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1342 (Fed. Cir. 2001) ("[A] claim term should be construed consistently with its appearance in other places in the same claim or in other claims of the same patent.").

In sum, the intrinsic evidence is consistent with Plaintiff's alternative proposed construction of the disputed term as "an indicator for specifying a command that comprises a code."

As to the extrinsic evidence, the above-discussed reading of the specification comports with the expert opinion submitted by Plaintiff in the Declaration of Dr. Kevin Almeroth:

- 7. With respect to the term "command indicator comprising a command code" of claim 1, it is my opinion that a person of ordinary skill in the art, after considering the '492 Patent and its file history, would readily understand the meaning of this term. More particularly, a person of ordinary skill in the art would understand this term to mean "an indicator for specifying a command that comprises a code," which is consistent with the use of the term in the patent itself. I base this opinion on my general understanding of the field of wireless networking and communications, and on my understanding of the system described in the '492 Patent, which is focused on remote monitoring and/or controlling of devices.
- 8. The invention disclosed in the '492 Patent can comprise the transmission of messages that include commands. *See*, *e.g.*, '492 Patent at 2:50-52; 7:30-36; 10:25-36. A command can request data from the receiving device as necessary. *See*, *e.g.*, '492 Patent at 10:25-36. For example, in an implementation of the invention in a home heating and cooling system, a command may request data that includes an ambient temperature. *See*, *e.g.*, '492 Patent at 7:60-8:6. Commands can also include a ping, an acknowledgement, an emergency message, or a request for general data. *See*, *e.g.*, '492 Patent at 10:25-36.
- 9. As illustrated, for example, in Figure 7, a command can be transmitted as a portion of the packet. The type of command may be represented by a command code. For example, as described with respect to Figure 9, the command code

"08" is a ping request used to determine a transceiver's health. See, e.g., '492 Patent at 11:45-50. Thus, a portion of the packet can indicate a command; and the specific command can be represented by a code. Those of ordinary skill in the art would readily understand this concept within the context of the '492 Patent. Accordingly, a person of ordinary skill in the art would understand "command indicator comprising a command code" to mean "an indicator for specifying a command that comprises a code."

10. That a person of ordinary skill in the art would readily understand the meaning of this term is further supported by the prosecution file history of the '492 Patent. There, the examiner cited "command indicator comprising a command code" in his Notice of Allowability dated February 11, 2009, which evidences his understanding of the phrase.

8/24/2012 Almeroth Decl., Dkt. No. 545-1 at ¶¶ 7-10. Defendants have not addressed this portion of the Almeroth Declaration in their brief and have not submitted any competing expert opinion. (*See* Dkt. No. 546 at 6-8.)

The Supplemental Declaration of Dr. Kevin Almeroth adds additional support for "the concept of using codes to indicate commands":

- 4. It is my opinion that a person of ordinary skill in the art would readily understand the meaning of the term "command indicator comprising a command code," as set forth in my first declaration. Dkt. No. Dkt. No. [sic] 545-1 at para. 7-10.
- 5. More particularly, those of ordinary skill in the art would readily understand the concept of using codes to indicate commands.
- 6. In the context of the Internet Protocol (IP), for example, there is a companion protocol known as the Internet Control Message Protocol (ICMP), which uses codes to indicate commands. ICMP is widely used throughout the Internet to send alerts when problems arise in delivering IP packets.<sup>1</sup>
- 7. More specifically, ICMP uses fields such as "type" and "code" to specify the type of command being sent. For example, for an "echo request" command, the type is 8 and the code is 0. An "echo request" command instructs the host to which the command is destined to respond with an "echo response" indicating that there is an operational path between the source and destination.

8. Those of ordinary skill in the art would be familiar with, for example, the use of commands in ICMP and the representation of those commands using codes. Thus, the concept of using codes to indicate commands would be readily understood by those of ordinary skill in the art, at least by way of the example given above in the context of the ICMP.

[footnote 1:] ICMP is described more fully in the Internet Engineering Task Force (IETF) Request for Comments (RFC) known as "RFC 792."

9/12/2012 Almeroth Supplemental Decl., Dkt. No. 550-1 at ¶¶ 4-8.

Defendants present no authority to support their proposition that two recitations of a term using the indefinite article, in this case "a command indicator," renders the claim indefinite. On balance, a person of ordinary skill in the art would read the second recitation of "a command indicator" to refer back to "a command indicator comprising a command code" for antecedent basis, despite the repeated use of the indefinite article "a." *Cf. In re Kelley*, 305 F.2d 909, 916 (C.C.P.A. 1962) ("Automatic reliance upon a 'rule against double inclusion' will lead to as many unreasonable interpretations as will automatic reliance upon a 'rule allowing double inclusion'. The governing consideration is not double inclusion, but rather is what is a reasonable construction of the language of the claims.").

Finally, the constituent terms "indicator," "command," and "code" do not themselves require further construction. Rather, the Court can resolve the dispute by construing the relationship between these terms and by explaining that the "command indicator" is for specifying a command. *See, e.g., U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) ("Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy."); *O2 Micro*, 521 F.3d at 1362 ("[D]istrict courts are not (and should not be)

required to construe every limitation present in a patent's asserted claims."). This is particularly appropriate given that Defendants have only presented an indefiniteness challenge and have not proposed any alternative construction of the term as a whole or of any of the constituent terms.

In light of the evidence discussed above, particularly Claim 22, Figure 9, and the above-quoted portions of the specification, the Court construes "command indicator" to mean "an indicator that: (1) specifies a command; and (2) comprises a code."

Because "the meaning of the claim is discernible," Defendants' proposal that "command indicator" renders the claim indefinite is hereby rejected. *See, e.g., Exxon*, 265 F.3d at 1375; *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005) ("Only claims not amenable to construction or insolubly ambiguous are indefinite.") (citation and internal quotation marks omitted).

### U. "data value comprising a scalable message" ('492 Patent, Claim 1)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
See "scalable data value comprising a scalable message" and "scalable message"	None; indefinite under 35 U.S.C. § 112

(Dkt. No. 545 at 9; Dkt. No. 546 at 8.)

The parties have reached agreement that this term does not require construction. (Dkt. No. 555, 9/21/2012 Notice of Amended Joint Claim Construction Chart, at 1.) The Court therefore does not construe this term.

# V. "scalable message" ('492 Patent, Claims 1 and 8)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
Does not require construction – entitled to plain and ordinary meaning.	"a message that includes a variable length data section that comprises one or more data values"
Alternatively, "message in which the size of the message can be varied"	Alternatively: "a message in which the size of the message can be varied"

(Dkt. No. 545 at 10; Dkt. No. 546 at 10.)

The parties have reached an agreed stipulated construction on this term. (*See* Dkt. No. 559.) The Court therefore hereby adopts the construction now agreed upon by the parties that "scalable message" means "message in which the size of the message is varied."

# W. "scalable data value" ('492 Patent, Claim 8)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
See "scalable data value comprising a scalable message"	"a data section of a message having a varying number of bytes and packets"

(Dkt. No. 545 at 11; Dkt. No. 546 at 11.)

The parties have reached agreement that this term does not require construction. (Dkt. No. 555, 9/21/2012 Notice of Amended Joint Claim Construction Chart, at 1.) The Court therefore does not construe this term.

### X. "scalable data value comprising a scalable message" ('492 Patent, Claim 8)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
Does not require construction – entitled to	None; indefinite under 35 U.S.C. § 112
plain and ordinary meaning.	
	Alternatively: "a data value comprising a
Alternatively, "a data value comprising a	message in which the size of the message is
message in which the size of the message is	varied"
varied"	

(Dkt. No. 545 at 12; Dkt. No. 546 at 11-12.)

The parties have reached an agreed stipulated construction on this term. (*See* Dkt. No. 559.) The Court therefore hereby adopts the construction now agreed upon by the parties that "scalable data value comprising a scalable message" means "a data value comprising a message in which the size of the message is varied."

# Y. "configured to" ('492 Patent, Claim 1)

Plaintiff's Proposed Construction	<b>Defendants' Proposed Construction</b>
Does not require construction – entitled to plain and ordinary meaning.	"actually programmed or equipped with hardware or software to"
Alternatively, "programmed or equipped with hardware or software to be capable of"	

(Dkt. No. 545 at 14; Dkt. No. 546 at 12.)

#### (1) The Parties' Positions

Plaintiff submits that this is a "commonly-used term that requires no further construction," as found by the *Toro* court regarding the use of this term in the '511 Patent. (Dkt. No. 545 at 14.) Alternatively, in the event the Court finds construction necessary, Plaintiff proposes a construction based on the specification as well as an extrinsic dictionary definition. (*Id.* (citing '492 Patent at 6:10-12; citing Ex. 4 (Internet version of *The American Heritage Dictionary* defining "configured" as "designed, arranged, set up, or shaped with a view to specific applications")).)

Defendants respond that their proposal was the construction reached in *ABB*, which Defendants submit expressly rejected Plaintiff's contention that "configured to" only requires mere capability rather than actual configuration. (Dkt. No. 546 at 12).

# Plaintiff replies:

Put simply, because "configured to" means to be designed with a view to perform a certain function, requiring a present ability improperly narrows the meaning of this term. *Id.* In other words, to be "configured to" means simply to have certain capabilities, regardless of whether those capabilities are actually performed. *See CSB Sys. Int'l Inc. v. SAP Am., Inc.*, No. 10-2156, 2012 WL 1079986, at \*10 (E.D. Pa. April 2, 2012) (finding claims encompassing a hardware and software configuration "must have certain capabilities, regardless of whether those capabilities are put to use") (emphasis added).

(Dkt. No. 550 at 10.)

#### (2) Analysis

Claim 1 of the '492 Patent recites (emphasis added):

- 1. In a communication system to communicate command and sensed data between remote devices, the system comprising:
- a receiver address comprising a scalable address of at least one remote device;
  - a command indicator comprising a command code;
  - a data value comprising a scalable message; and
- a controller associated with a remote wireless device comprising a transceiver *configured to* send and receive wireless signals, the remote device *configured to* send a preformatted message comprising the receiver address, a command indicator, and the data value via the transceiver to at least one other remote device.

The *ABB* Order found that treating "configured to" as meaning merely "capable of" "would render claim 1 virtually devoid of meaning" and "would eliminate any meaningful limits to the claims." 2012 WL 3112302, at \*10-\*11 (citing *Typhoon Touch Techs., Inc. v. Dell, Inc.*, No. 6:07-cv-546, 2009 WL 2243126, at \*7 (E.D. Tex. July 23, 2009) (Davis, J.), *aff'd in part, rev'd in part*, 659 F.3d 1376 (Fed. Cir. 2011)).

The district court opinions cited by Plaintiff in rebuttal are ultimately unpersuasive on this point. (Dkt. No. 550 at 15.) First, *Noah Systems, Inc. v. Intuit Inc.* simply noted the parties' agreement that "[c]onfigured to receive data inputs" be "construed as designed or adapted to be

capable of receiving." No. 10-CV-01420-AJS, 2011 WL 6090698, at \*3 & App'x A. Because there was no dispute and no analysis, *Noah Systems* is unpersuasive.

Second, *Cellport Systems, Inc. v. Peiker Acustic GmbH & Co. KG* construed a limitation of "being configured to operate with" several "functionalities" to mean "being designed and programmed to support" those functionalities. 847 F. Supp. 2d 1293, 1311 (D. Colo. 2012). The context of *Cellport*, however, was that "depending upon the features that one has in his phone and the capabilities that have been designed and programmed into whatever [']pocket['] the user is using, the interface module has been designed and programmed to accommodate the combination and enable the user to enjoy the features he desires and has been able to obtain." *Id.* On balance, the discussion of claims directed to generic "functionalities" in *Cellport* is not analogous to the above-captioned case, in which Claim 1 specifically recites "a controller associated with a remote wireless device comprising a transceiver configured to send and receive wireless signals" and "the remote device configured to send a preformatted message comprising the receiver address."

Third, *CSB-System International Inc. v. SAP America, Inc.* found that "the claims encompass a particular hardware and software configuration, which, as provided, must have certain capabilities, regardless of whether those capabilities are put to use." --- F.Supp.2d ----, 2012 WL 1079986 (Fed. Cir. Apr. 2, 2012). This principle is inapplicable here, however, because the dispute is not whether "capabilities are put to use" but rather whether the "controller" recited in Claim 1 of the '492 Patent is "actually programmed or equipped with" certain capabilities. Thus, if anything, *CSB-System* actually supports Defendants' proposed construction rather than Plaintiff's proposal.

On balance, however, Defendants' proposal of construing the term as meaning "actually configured" adds nothing that is not already present in the plain and ordinary meaning of the term. *See, e.g., U.S. Surgical*, 103 F.3d at 1568 ("Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy."); *O2 Micro*, 521 F.3d at 1362 ("[D]istrict courts are not (and should not be) required to construe every limitation present in a patent's asserted claims."). This Court hereby construes "configured to" as having its plain and ordinary meaning, which the Court understands to require not merely being capable of being configured but rather being actually configured.

#### **CONCLUSION**

The Court adopts the constructions set forth in this opinion for the disputed terms of the patents-in-suit. The parties are ordered that they may not refer, directly or indirectly, to each other's claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

So ORDERED and SIGNED this 19th day of October, 2012.

RODNEY GILSTRAP